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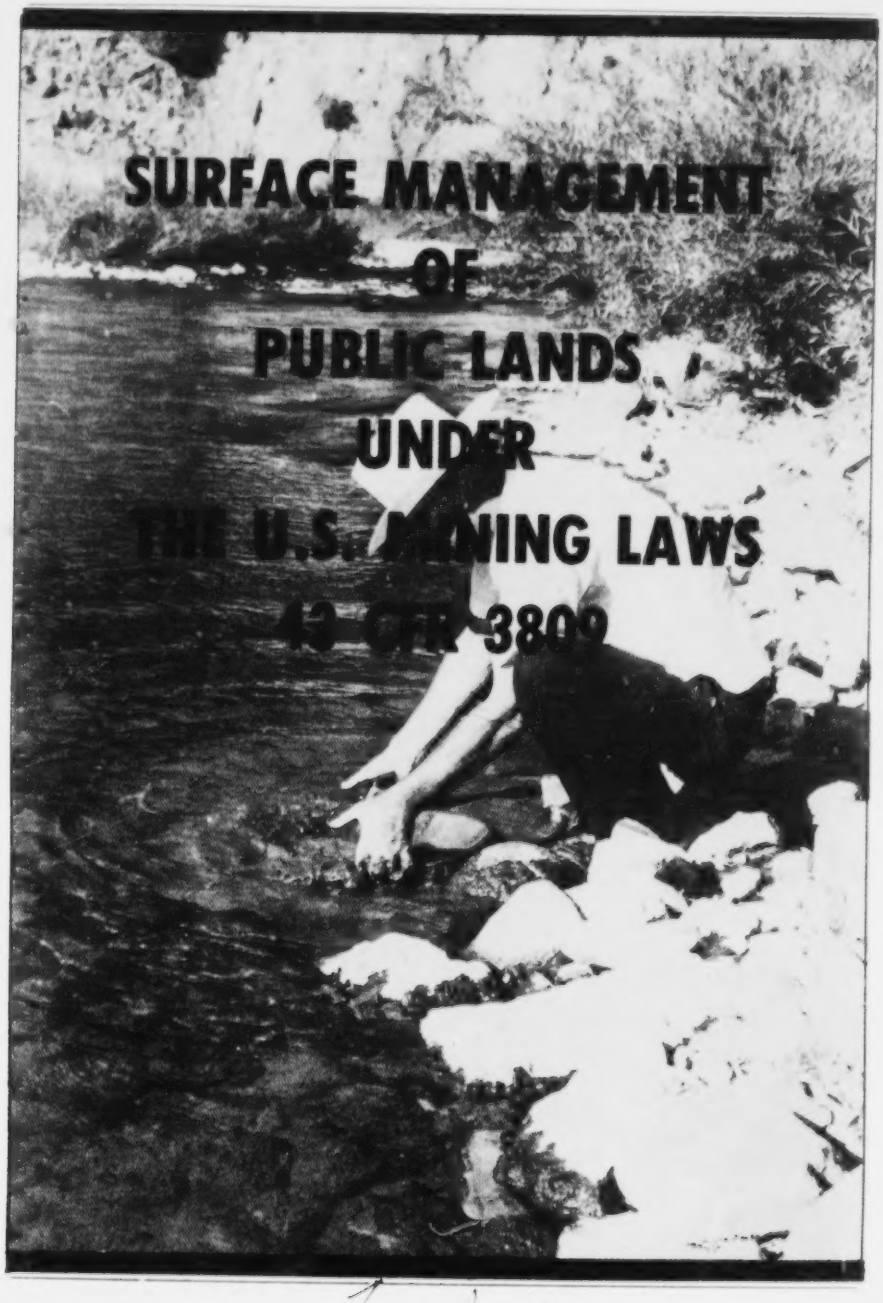
FINAL

Environmental Impact Statement

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT



Director, Bureau of Land Management

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DEPARTMENT OF THE INTERIOR

FINAL

ENVIRONMENTAL IMPACT STATEMENT

AUGUST 1980

SURFACE MANAGEMENT OF PUBLIC LANDS UNDER THE U.S. MINING LAWS

43 CFR 3809

Prepared by

BUREAU OF LAND MANAGEMENT

DEPARTMENT OF THE INTERIOR

Frank Gregg

Director, Bureau of Land Management

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SUMMARY

( ) Draft (X) Final Environmental Impact Statement
Department of the Interior, Bureau of Land Management

1. *Type of Action: (X)* Administrative ( ) Legislative

2. *Brief Description of Action:* Mining operations (defined in the proposed regulations 43 CFR 3809.0-5) authorized under the Mining Law of 1872, as amended, are restricted under the provisions of Sections 302(b), 601(f), and 603(c) of the Federal Land Policy and Management Act (FLPMA), 1976. The proposed action provides for the provisions of FLPMA and is the issuance of regulations, 43 CFR 3809, which establishes procedures for mining operations to (1) prevent unnecessary or undue degradation of the public lands, (2) protect the scenic, scientific and environmental values of the public lands in the California Desert Conservation Area against undue impairment, and (3) manage Wilderness Study Areas in a manner so as not to impair the suitability of such areas for preservation as wilderness.

3. *Summary of Environmental Impacts:* The proposed action will provide a means to lessen the environmental impacts presently resulting from mining operations by requiring an approved plan of operation for those activities which may result in impairment and unnecessary or undue degradation of the public lands.

4. *Alternatives Considered and/or Compared:*
   A. Forest Service Surface Management Regulation 36 CFR 252.
   B. Surface Management Regulation 43 CFR 3809 published as proposed rulemaking on December 6, 1976.
   C. Submit new legislation.
   D. No action.
   E. Stricter standards for wilderness study areas.
   F. Preferred Alternative

5. *Comments Will Be Requested From the Following:*
   Department of Agriculture
     Forest Service
     Soil Conservation Service
   Department of the Interior
     Fish and Wildlife
     Bureau of Mines
     Geological Survey
     Bureau of Indian Affairs
     National Park Service
     Office of Surface Mining
     Heritage Conservation and Recreation Service
   Department of Commerce
   Department of Energy
   Nuclear Regulatory Commission
   Environmental Protection Agency
   Advisory Council on Historic Preservation
   States
     Alaska
     Arizona
     Arkansas
     California
     Colorado
     Florida
     Idaho
     Louisiana
     Mississippi
     Montana
     Nebraska
     Nevada
     New Mexico
     North Dakota
     Oregon
     South Dakota
     Utah
     Washington
     Wyoming

6. *Date Draft Statement Made Available to EPA and the Public: March 3, 1980.*

PREFACE

On March 3, 1980, the Department published in the Federal Register (43 F.R. 13956) proposed 43 CFR 3809 rulemaking on Surface Management of Mining Claims Located on the Public Lands. These regulations will affect the extraction of minerals located under the Mining Law of 1872 on public domain (lands subject to public land laws of the United States) administered by the Bureau of Land Management (BLM). Currently, the BLM manages over 447 million acres with no regulations for locatable mineral resources except for 43 CFR 3802 discussed below. 43 CFR 3809 would affect mining operations on about 60 percent of BLM administered public lands.

The proposed action presented in the Draft Environmental Impact Statement remains the same in the Final Environmental Impact Statement (EIS). However, in response to public comment the Final EIS has been refined for narrative continuity and clarity, and modified by updating tables and adding minerals data, reflected by changes in Chapters 1 through 7.

As a result of management considerations and public comment, a new alternative was developed. This is described and evaluated in Chapter 8 as Alternative F and is the Bureau's preferred alternative. This preferred alternative F is a combination of certain elements of the proposed action (43 CFR 3809) and Alternative A (36 CFR 252).

Originally, the final 43 CFR 3809 regulations would have superseded 43 CFR 3802 regulations for lands under wilderness review. This plan has been changed as a result of public confusion and comment, and 43 CFR 3802 regulations stand as final rulemaking separate from 43 CFR 3809. The regulations for lands under wilderness review (43 CFR 3802) were implemented April 2, 1980.

This Final Environmental Impact Statement (EIS) was prepared in compliance with the National Environmental Policy Act of 1969 to assess the impacts of 43 CFR's 3802 and 3809 on BLM lands. A Regulatory Analysis on the proposed regulations was prepared and is on file and available at the BLM Division of Mineral Resources-520, Washington, D.C., 20240, or from the State Offices of the BLM.

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Appendix II	36 CFR 252	(Forest Service Regulations)
Appendix III	43 CFR 3809	(Proposed Rules of December 6, 1976)
Appendix IV	43 CFR 3802	(Final Rules of March 3, 1980)
Appendix V	30 U.S.C. § 21a	(Mining and Minerals Policy Act of 1970)

CHAPTER 1

DESCRIPTION OF THE PROPOSED ACTION

INTRODUCTION

The purpose of the proposed regulations 43 CFR 3809, published March 3, 1980, is to establish procedures and guidelines for certain mining operations authorized under the Mining Law of 1872 1/ in a manner that prevents unnecessary or undue degradation on public lands administered by the BLM. At the same time, it is among the objectives of 3809 to allow and not unduly hinder mineral activities. The regulations require plans of operations, depending on certain threshold levels, and reasonable reclamation. Where plans of operations are required, bonding to insure reasonable reclamation is requisite at the discretion of the authorized officer. The 3809 regulations also include provisions for Wild and Scenic Rivers, Areas of Critical Environmental Concern, the California Desert Conservation Area (Map 1-1), as well as provisions for Wilderness Study Areas which have been implemented as 43 CFR 3802. The proposed regulations have been appended (Appendix I) for easy and detailed reference.

Purpose

According to existing statutes and policies, it is the Department's responsibility to encourage domestic mineral production, to prevent unnecessary or undue degradation, to prevent impairment of suitability for inclusion within the Wilderness Preservation System of lands under review for such inclusion, and to ensure reclamation of disturbed sites caused by mining operations. Legislation to change the Mining Law of 1872 has been the topic of continuing discussions among the mining industry, the Congress, and the Executive Branch for at least the last decade. Under scrutiny is the current viability of the Mining Law which permits prospecting, location of claims and development of certain minerals on public lands. This EIS, in order to meet the Department's responsibilities under the Federal Land Policy and Management Act of 1976 (FLPMA), the Mining and Minerals Policy Act of 1970 (Appendix V) and the National Environmental Policy Act of 1969 (NEPA) (83 Stat. 852, U.S.C.), assesses the impacts of interim regulations 43 CFR 3802 and proposed

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1/ While the phrase "Mining Law of 1872" is customarily used for the Act of May 10, 1872 (30 U.S.C. 22, 17 Stat. 91 (1976)), the BLM recognizes that the act amended previous mining acts, the Act of July 26, 1866 (14 Stat. 251) and the Act of July 9, 1870 (16 Stat. 217)(portions of each being still in effect); and has itself been amended by ensuing legislation. However, for the purpose of simplicity, subsequent references within the text to the process of acquisition of locatable minerals under the United States Mining laws shall be the "Mining Law of 1872" or the "1872 Mining Law."

MAP 1-1

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIFORNIA DESERT
AND
KING RANGE
CONSERVATION
AREAS
OREGON
KING RANGE
CONSERVATION
AREA
Areas of Population
San Francisco
NEVADA
Bakersfield
CALIFORNIA
DESERT
CONSERVATION
AREA
Los Angeles
San Diego

regulations 43 CFR 3809 (see Appendices IV and I) which have been effected by FLPMA and other pertinent legislation. The intent of these regulations is to prevent unnecessary or undue degradation of the public lands and to prevent impairment of lands under review for inclusion in the Wilderness Preservation System from mineral activities carried out under the Mining Laws. The 3802 and 3809 regulations will indicate procedures for notifying the BLM of present or projected activities conducted on mining claims on public lands and will establish standards for approval of the conduct of operations, including reclamation. The purpose of the Environmental Statement is to examine the impacts on the mining industry (in terms of finding and producing essential mineral commodities) if the proposed regulations are adopted, as well as impacts on the environment. Additionally, this EIS presents six alternatives to the proposed regulations and discusses their respective impacts. (See Chapter 8.)

Summary of Program Alternatives

Chapter 8 will discuss the following alternatives to the proposed action:

A. Adopt the Forest Service Regulations, 36 CFR 252, for mining operations on public lands.

B. Adopt the BLM proposed regulations, 43 CFR 3809, as published December 6, 1976, in the Federal Register.

C. Propose legislative changes including: stricter reclamation standards, various leasing systems, modification of the Mining Law of 1872 for United States retention of surface ownership after patent, and legislation based on the "Mining In Parks Act" (90 Stat. 1342) within identified National Parks and Monuments, September 28, 1976.

D. Adopt a "no action" alternative whereby existing State and Federal surface management requirements would suffice. The 3802 regulations will remain as final.

E. Adopt a stricter nonimpairment concept for Wilderness Study Areas, allowing only mining operations which create only temporary impacts and can be terminated at any time.

F. Preferred alternative which will allow most mining operations to begin or continue without a plan approval process. The preferred alternative is a modification of the 3809 regulations and does not include the 3802 regulations.

Approach to Environmental Impact Statement

This document assesses anticipated national impacts resulting from implementation of proposed regulations on mining claims pursuant to the

Mining Law of 1872, located on approximately 447 million acres of public lands. (Table 1-1; table does not include at least 40 million acres of patents issued with all mineral rights reserved to the United States.) Under the proposed regulations, upon submission of a plan of operations, site-specific impacts will be analyzed as required.

Site-specific analyses will assist the BLM in formulating protective measures to be followed by prospectors and mining claimants to prevent unnecessary or undue degradation or impairment of suitability for inclusion in the Wilderness Preservation System.

Due to greatly diverse environmental conditions in the public land states (principally the Western United States and Alaska) as well as the broad scope of mining operations, it was decided to treat the environment in broad categories. Thus, categories of soil, vegetation, wildlife, etc., are discussed with the broad groupings of mining activities, namely prospecting, exploration, and mining. The exact nature of specific mitigative measures taken to protect non-mineral resource values will be determined through examination of proposed mining operations exceeding a predetermined threshold.

HISTORICAL BACKGROUND

Mining Law of 1872

Under the Mining Law of 1872 "all valuable mineral deposits in lands belonging to the United States" are free and open to entry, location and patent. "Locatable" minerals include both metallic and non-metallic minerals such as gold, silver, cinnabar, lead, tin, copper, uranium, molybdenum, borax, feldspar and gypsum. When found in sufficient quantity and quality on public land open to mineral entry, those minerals recognized as valuable by standard authorities are subject to location. Specifically excluded from location and thus unaffected by the proposed action are leasable minerals, e.g., oil, gas, coal, and phosphate; and building materials such as sand and gravel. A mining claimant who locates a claim in compliance with "regulations prescribed by law," is entitled to the "exclusive right of possession and enjoyment" to the surface area of his claim and the mineral veins, lodes and ledges within his claim, along with extralateral rights. In locating a claim, the claimant must comply with the requirements of FLPMA as well as State laws governing the method of location and recordation of claims. Upon location, a claimant is required to perform annual assessment work; failure to perform that work may subject the claim to entry and location by another party or to conflicting interests asserted by the United States. A mining claimant may elect to proceed to patent on his lode, placer or millsite claim, at which time he gains title in fee simple from the Government. An unpatented mining claim is a property interest in the land and mineral estate to which the United States holds the deed in trust.

TABLE 1-1

PUBLIC LANDS BY STATE, OPEN TO

MINERAL LOCATION, SEPTEMBER 30, 1977 1/

(Does not account for lands withdrawn from mining)

State	Public Domain (Acres)
Alaska	274,191,369
Arizona	12,559,144
Arkansas	1,589
California	16,200,503
Colorado	7,959,777
Florida	1,189
Idaho	11,873,957
Louisiana	7,217
Mississippi	639
Montana	6,271,930
Nebraska	8,581
Nevada	49,115,197
New Mexico	12,634,186
North Dakota	68,102
Oregon	15,644,378
South Dakota	276,297
Utah	22,869,394
Washington	309,030
Wyoming	17,782,738
TOTAL	447,775,217

1/ Bureau of Land Management, Public Land Statistics, 1977, pp.20-21.

The Government can contest a mining claim at anytime for any cause. The Secretary of the Interior has the authority to initiate a contest to see "that valid claims may be recognized, invalid ones eliminated, and the rights of the public preserved" (Cameron v. United States, 252 U.S. 450 (1920)). "Such authority is not dependent upon the assertion by the United States of some other use for or the existence of some contemplated public project involving the public lands in question. Establishment of clear title to public lands is itself sufficient justification for the action" (Davis v. Nelson, 329 F.2d 840 (9th Cir. 1964)).

The power to contest, coupled with the Secretary's authority to make withdrawals of land from operations conducted under the Mining Law, has been used in the past to protect environmentally sensitive areas from the impacts associated with mining operations. Reliance on the withdrawal mechanism as a method of environmental management has raised questions about its impact on the viability of the mining industry. (See Bennetham and Lee, Is Our Account Overdrawn? This question was also addressed by the Interagency Nonfuel Mineral Policy Task Force.) However, such withdrawal does not, by itself, cause preexisting valid mining claims to become invalid. In the absence of regulations, withdrawal procedures have provided an "all or nothing" management tool to control mining operations authorized under the 1872 Mining Law. The proposed regulations will allow greater flexibility for surface management under the U.S. mining laws.

Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act (43 U.S.C. §1701 et seq.) was enacted to establish guidelines for the administration of public land policy and to provide for the management, protection, development, and enhancement of the public lands. The Act requires a continuing inventory of the public lands, their resources and other values. As part of this inventory, roadless areas of five thousand acres or more or roadless islands possessing characteristics as defined in the Wilderness Act of 1964 (16 U.S.C. §1131 et seq.) are to be identified and subjected to an intensive review to determine whether such areas should be recommended to Congress as suitable for preservation as wilderness. (See §603 FLPMA.)

Section 302(b) of FLPMA (43 U.S.C. §1732(b)) states:

> Except as provided in section 314, section 603, and subsection (f) of section 601 of this Act and in the last sentence of this paragraph, no provision of this section or any other section of this Act shall in any way amend the Mining Law of 1872 or impair the rights of any locators or claims under that Act, including, but not limited to, rights of ingress and egress. In managing

the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands. (Emphasis added.)

The Secretary is directed to prevent, by regulation or otherwise, unnecessary or undue degradation to the public lands from operations occurring pursuant to the Mining Law of 1872. Additionally, with respect to roadless areas of five thousand acres or more and roadless islands possessing wilderness characteristics which are subject to the intensive review, the Secretary is to assure that activities occurring pursuant to the Mining Law of 1872 do not result in the impairment of the suitability of such areas for preservation as wilderness. Operators with valid existing rights and grandfathered rights are exempt from the impairment criteria (§603(c) and §701(h)).

In Section 314, FLPMA further directs that mining claimants, in order to hold their claims, must record their claim with the proper BLM office and file either an affidavit of assessment work or a notice of their intention to continue to hold the claim annually thereafter. (See 43 CFR, Subpart 3833.) Section 601 of FLPMA (43 U.S.C. 1781) provides for the "...immediate and future protection and administration of the public lands in the California Desert within the framework of a program of multiple-use and sustained yield, and maintenance of environmental quality." Section 601(f) states that, "...mining claims located on public lands within the California Desert Conservation Area shall be subject to such reasonable regulations as the Secretary may prescribe...." Such regulations shall provide for protection for the "...scenic, scientific, and environmental values of the public lands of the California Desert Conservation Area against undue impairment, and to assure against pollution of the streams and waters within the California Desert Conservation Area." Another important consideration found in 601(f) is that even after a mineral patent is issued in the California Desert Conservation Area, the patented land remains subject to the regulations.

Previous Regulatory Activities

Although public lands fall under the protection of such acts as NEPA and the Clean Air Act, prior to implementation of the Wilderness Study Area regulations 43 CFR 3802, on April 2, 1980, the BLM had no rules or regulations governing environmental impacts from operations conducted under the Mining Law of 1872. The Bureau proposed rulemaking on December 6, 1976 (41 F.R. 53428-53433), which would have accomplished this. That rulemaking, which was never promulgated as final, was the object of considerable public comment. The 1976 proposed rulemaking constitutes one of the alternatives to the proposed action which is addressed by this environmental impact statement.

Both the Forest Service (36 CFR 252) and the National Park Service (36 CFR 9) have regulations governing the conduct of mining operations to

safeguard environmental values for lands under their jurisdiction. The regulations proposed would not be applicable to such lands. However, because the Forest Service regulations represent a different administrative proposal, they are an alternative addressed by this statement.

EXISTING STATE AND FEDERAL POLICIES

Congressional Expressions of Policy

Congress has declared in the Mining and Minerals Policy Act of 1970 (30 U.S.C. §21a) that it is in the national interest to foster private enterprise in the development of economically sound and stable domestic mining, minerals, metal, and mineral extraction industries. In the same Act, Congress also stated that it wished to foster and encourage reclamation of mined lands to lessen adverse environmental impacts resulting from mineral extraction. The responsibility for fostering development of the minerals industry and at the same time diminishing adverse impacts was again emphasized in §102 12(a) of FLPMA where the Secretary is directed to implement the Mining and Minerals Policy Act of 1970.

Section 102 of the National Environmental Policy Act of 1969 (43 U.S.C. 4371 et seq.), states that "Congress authorizes and directs that, to the fullest extent possible...the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act...." Congress further expressed its concern by establishing the management mandate in FLPMA to prevent unnecessary or undue degradation of the public lands and to prevent the impairment of the suitability of certain categories of land for preservation as wilderness. (See also Interim Management Policy and Guidelines for Lands under Wilderness Review, BLM, December 12, 1979.)

Departmental Policy

While it is the Department's policy to encourage the development of mineral resources, public interest requires that adequate measures be taken to minimize or correct damage to the environment and hazards to public health and safety. In Chapter 8, some of the alternatives are environmentally disposed while others tend more to mineral development; none, including the "no action" alternative, ignore environmental or mineral development considerations.

Previous and Pending Legislative Action

In 1964, Congress established the Public Land Law Review Commission to conduct a review of existing public land laws and regulations and to recommend necessary revisions. Latest in a long series of legislative proposals include two bills to amend the Mining Law of 1872, which were introduced in the 95th Congress, First Session. The first, H.R. 5831, retained the location and patent provisions of the Mining Law. It provided, with respect to environmental protection, that the provisions

of FLPMA would apply to claims located pursuant to its provisions. The second bill, H.R. 9292, replaced the location/patent system of the Mining Law of 1872 with a leasing system. The Secretary would issue leases containing reasonable stipulations for the protection of the environment, to qualified bidders. The environmental review would be under regulations prescribed by the Secretary and would be analogous to the environmental review and protection afforded under the various existing mineral leasing acts. Congress held hearings on the proposed bills, "Mining Law Reform: Hearings on H.R. 5831 and H.R. 9292 before the Subcommittee on Mines and Mining of the House Committee on Interior and Insular Affairs", 95th Congress, First Session (1977), but had no other action. Senator Jackson has introduced another bill, S. 366 in the 96th Congress to amend the Mining Law, but the bill is not expected to receive any action.

Joint Federal-State Program

Duplication of State and local procedures shall be avoided through mutual cooperation to the extent possible. If the requirements of laws and regulations of any such State provide general protection of environmental quality and values at least as stringent as would occur under exclusive application of the proposed regulations, such State laws and regulations may be applied as conditions of any proposed plan of operations.

In addition, the Secretary will consult with appropriate representatives of each State to provide for a joint Federal-State program for administration and enforcement. The purpose of the program would be to prevent unnecessary or undue degradation of the public lands and their resources from exploration and mining operations which are conducted under the U.S. Mining Laws.

As shown on Table 1-2, most of the lands affected by the proposed regulations are located in States with mining and reclamation laws. With the exception of Alaska, Arizona, Nevada, New Mexico and North Dakota, all of the States have legal guidelines for locatable mining activities. Arizona and Nevada have air quality regulations which apply to surface disturbances but not exclusively to mining activities. New Mexico's and North Dakota's State mining laws apply only to coal; therefore, mining activities under the 1872 Mining Law are not regulated in these States.

Thresholds and requirements vary for each State with mining and reclamation laws. In most, a permit must be submitted and the operator must post a performance bond. These requirements are briefly outlined in Table 1-2. The size of the mining operation also determines the applicability of the requirements. For example, Wyoming State law allows a short-form permit for operations under ten acres in size; Utah's requirements apply only for activities producing greater than 500 tons or disturbing greater than 2 acres in 12 months; and in Montana, an operation disturbing less than 5 acres or producing less than 36,000 tons per year requires a permit but not a plan of operations or reclamation plan.

Table 1-2 Summary of State Surface Mining and Mined Land Reclamation Laws 1/

State	Title or Code Citation	Minerals Covered	Prospecting and/or Exploratory License and/or Permit Requirements for Operations: Application	Fee	Penalty	Bond Requirements	Reclamation Requirements	Assertion of Jurisdiction Over Mining Operations on Federal Lands
AK	Laws under review							
AZ 2/	No laws							
CA	The Surface Mining & Reclamation Act of 1975, effective January 1, 1976	All	Required by local government. Reclamation plan is required	Yes	—	Yes	Reclamation will be accomplished to meet proposed or potential uses of the land. Responsibility of (State) lead agency for review & approval of reclamation plans and permits for operations. The following are some minimum acceptable practices, but not limited to: soil erosion control, water quality and watershed control (compliance with 2 S. EPA regional WQ Boards, State Dept. of F&G, and certain other agencies' regulations & requirements), flood control, protection of F&W habitat, disposal of mine waste rock & overburden, soil salvage, final slope gradient, resoiling, revegetation, etc.	Yes, all lands. Formal agreements exist with BLM and Forest Service. Jurisdiction not conceded.
CO	Colorado Mined Land Reclamation Act, effective May 20, 1976	All	Permit & reclamation plan required. Permit valid for life of operation. Prospecting permit required.	Yes	Yes	Yes	Grade appropriate to final land use; protect drainage from pollution of acid–forming or toxic producing material; segregate and replace topsoil or other strata best able to support vegetation; and revegetate appropriate to proposed land use. Measures to minimize disturbance to hydrological balance.	Yes, all lands. Exemptions: National Parks, National Wildlife Refuge System, National System of Trails, Wild and Scenic Rivers, and National Recreation Areas.
ID	The Idaho Surface Mining Act, Title 47, Chapter 15, Idaho Code (1976)	All	Reclamation plan required. Permit required for placer & dredge mining; submission & approval of a formalized plan of exploration activities is required.	—	Yes	Yes	Level ridges of overburden to minimum of 10 ft. at top; level peaks of overburden to minimum of 15 ft. at top; prepare overburden piles to control erosion; minimize siltation of lakes & streams from water run–off from affected lands; cross–ditch abandoned roads to avoid erosion gullies; plug exploration drill holes; when possible, top affected land with overburden conducive to erosion control & establishment of vegetative growth; prepare tailings ponds to prevent hazard to human or animal life; & complete reclamation within 1 yr. after surface mining operations permanently cease or are abandoned.	Yes, all lands. For lands disturbed prior to 5/31/72 reclamation not required.
MT	The Montana Strip & Underground Mining Act, Title 50, Chapter 10, R.C.M. 1974, Effective July 1, 1975	Coal & Uranium	Permit & reclamation plan required. Permit term: 1 yr.	Yes	Yes	Yes	Provides for grading, backfilling, highwall reduction, topsoiling, water control, subsidence stabilization, control of erosion, & landslides, & establishment of vegetative cover by planting legumes, grasses, shrubs, & trees to establish permanent diverse vegetative cover.	Yes, all lands. For hardrock, no Open Cut, no.

1/ Sources: U.S. Department of the Interior, Bureau of Mines, Division of Environment, Washington, D.C., 1974, revised 1977, and personal communications with all the State Agencies 1979.

2/ AZ & NV have air quality control laws not specifically related to mining activities.

Table 1-2 Summary of State Surface Mining and Mined Land Reclamation Laws (Cont'd.)

State	Title or Code Citation	Minerals Covered	Prospecting and/or Exploratory License and/or Permit Requirements for Operations: Application	Fee	Penalty	Bond Requirements	Reclamation Requirements	Assertion of Jurisdiction Over Mining Operations on Federal Lands
MT (Cont'd.)	Reclamation of Mining Lands Chapter 12, effective Sept. 15, 1971	Any ore, rock or substance other than oil, gas, bentonite, clay, coal, sand, gravel, phosphate rock or uranium	Exploration license & development permit must be obtained from the Dept. of State Lands. A reclamation plan is required.	Yes	Yes	Yes	Approved reclamation plan must contain measures for: surface gradient restoration suitable for proposed land use; revegetation or other surface treatment; public health & safety; disposal of mining debris; diverting water to prevent pollution or erosion; reclamation of stream channels & banks to control erosion, siltation, & pollution.	
	Strip Mined Coal Conservation Act, Chapter 14, effective March 8, 1973	Coal	—	—	Yes	—	The Act provides for conservation of strippable and marketable coal by requiring each operator wishing to conduct strip coal mining within the State to submit, for approval of the Dept. of State Lands, a strip mining plan which outlines planned course of conduct of a strip mining operation including plans for removal & utilization of strippable and marketable coal located within area planned to be mined.	
	The Open Cut Mining Act, Chapter 15, effective March 16, 1973	Bentonite, clay, scoria, phosphate rock, sand & gravel.	Applications for contracts must be made to the Board of Land Commissioners if the planned operation involves removing 10,000 cubic yds. or more of product or overburden. A reclamation plan is required.	$50	Yes	Yes	Approved reclamation plan requires that the land be reclaimed for specific uses including forest, pasture, orchards, cropland, residence, recreation, industry, or wildlife habitat. Reclamation requirements include: establishment of vegetative cover; control water drainage; grading; removal or burial of metal or waste; and revegetation of affected area.	
	The Strip and Underground Mine Siting Act, Chapter No. 280, Montana Session Laws 1974, Senate Bill No. 681	Coal & Uranium	Mine site location permit & mining & reclamation plan required. Permit term 1 yr.	$50	Yes	Yes	Reclamation plan includes highwall elimination, drainage control, soil preparation, and revegetation.	
NV[2/]	No laws.							
NM	Coal Surface Mining Act, NM Statutes Annotated, Replacement Vol. 9, Part 1, Article 34, effective Feb. 29, 1972	Coal	Permit & mining plan required. Permit term: 1 yr. Prospecting permit application to be filed with BLM on BLM lands. Applicant must submit exploration plan to USGS.	Yes	Yes	Yes	Grade to produce gently undulating topography or such other topography as is consistent with planned end use of land. Grading shall be done in such a manner as to control erosion & siltation of affected area & surrounding property & water courses. Revegetation of affected area must be accomplised in accordance with previously approved mining plan.	Yes, all lands.

Table 1-2 Summary of State Surface Mining and Mined Land Reclamation Laws (Cont'd.)

State	Title or Code Citation	Minerals Covered	Prospecting and/or Exploratory License and/or Permit Requirements for Operations: Application	Fee	Penalty	Bond Requirements	Reclamation Requirements	Assertion of Jurisdiction Over Mining Operations on Federal Lands
ND	ND Century Code Chapter 38–14–Reclamation of Strip–Mined Lands, effective July 1, 1975	Coal	Permit & reclamation plan required. Permit term 3 yrs. By State Geological Survey	Yes	Yes	Yes	Regrade to approximate original contour or topography unless a different topography is approved; save, segregate, & respread suitable plant growth material to maximum of 5 ft., or all available material if 5 ft. is not available; impound, drain, or treat runoff water to minimize soil erosion, damage to agricultural lands & pollution of waters; backslope all final cuts, highwalls, & end walls to an angle not exceeding 35% from the horizontal. (The operator may propose alternative plans to backsloping); remove or bury all refuse. Dumping of refuse or other material not permitted outside the permit; & sow, set out, or plant seeds, plants, cuttings or trees, shrubs, grasses, or legumes. Reclamation to be completed within 3 yrs. after permit expires.	Yes, all lands.
OR	OR Mine Land Reclamation Act, as amended, effective July 1, 1972 amended, 1975	All	Permit & reclamation plan required. Permit term life of operation. Permit required 1 acre out of 8 for prospecting & exploration	Yes	Yes	Yes	Approved reclamation plan must contain: measures to be undertaken by operator in protecting the natural resources of adjacent lands; measures for rehabilitation of procedures to be applied in surface mining operation to control discharge of contaminants & disposal of surface mining refuse; procedures to be applied in rehabilitation of affected stream channels & stream banks to a condition minimizing erosion, sedimentation, & other factors of pollution; such maps & other documents as may be requested by Department of Geology & Mineral Industries; & a proposed time schedule for completion of reclamation operations.	Yes, all lands. Memorandum of Agreement exists with Forest Service.
SD	Surface Mining Land Reclamation Act, Title 45–6A, as amended 1975	All	Permit & reclamation plan required. Permit term 1 yr. Exploration permit required.	Yes	Yes	Yes	Separate & store topsoil; reduce highwalls to a slope not greater than 25%; grade & backfill to contour most beneficial to proposed land use; prevent erosion & sediment damage; bury toxic material; & revegetate affected area in accordance with agronomic & forestry recommendations.	Yes, all lands. Indian lands are exempted. Negotiated agreement exists with Forest Service.
UT	The UT Mined Land Reclamation Act, effective March 14 1975	All minerals of which at least 500 tons of material are mined or 2 acres of land excavated within 12 consecutive months.	Operator must file a notice of intention to mine, prospect, or explore	—	Yes	Yes	Reclamation to be performed in accordance with the reclamation plan which provides for conservation & restoration of topsoil; disposal of toxic material; grading, backfilling & compaction of soil material; & revegetation of affected area.	Yes, all lands. Indian lands exempted. Applicant must be bonded on Forest Service lands.

Table 1-2 Summary of State Surface Mining and Mined Land Reclamation Laws (Cont'd.)

State	Title or Code Citation	Minerals Covered	Prospecting and/or Exploratory License and/or Permit Requirements for Operations: Application	Fee	Penalty	Bond Requirements	Reclamation Requirements	Assertion of Jurisdiction Over Mining Operations on Federal Lands
WA	Surface--Mined Land Reclamation Act. Revised Code of WA Annotated, Title 78, Mines & Minerals, Chapter 78-44, effective January 1, 1971	All Minerals	Permit & reclamation plan required. Permit term: life of operation. No permits required for prospecting or exploration	Yes	Yes	Yes	In reclaiming excavations for use as lakes, all banks shall be sloped to 2 ft. below the groundwater line at a slope no steeper than 1½ ft. horizontal to 1 ft. vertical. In all other excavations, the side slopes shall be no steeper than 1½ ft. horizontal to 1 ft. vertical for their entire length. All strip pits and open pits shall be no steeper than 1 ft. horizontal to 1 ft. vertical. The slopes of quarry walls shall have no prescribed slopes, except where a hazardous condition is created the quarry shall be graded or backfilled to a slope of 1 ft. horizontal to 1 ft. vertical. In strip mining, peaks & depressions of spoil banks shall be constructed to a gently rolling topography. Suitable drainage shall be constructed to prevent the collection of stagnant water. All grading & backfilling shall be made with non-noxious, non-flammable, non-combustible solids. All acid-forming materials shall be covered with at least 2 ft. of clean fill. Vegetative cover shall be required & all surface mining that disturbs streams must comply with State fisheries laws.	Agreement exists with Forest Service. No enforcement on any other Federal lands.
WY	The Wyoming Environmental Quality Act, 1973, as amended, 1974, 1975, and 1978	All	Permit, license & reclamation plan required. License term: life of operation. Exploration license required.	Yes	Yes	Yes	Reclamation shall restore land to a condition equal to or greater than "Highest Previous Use." Land, after reclamation, must be suitable for previous use which was of greatest economic or social value to the community area, or must have a use which is of more economic or social value than all other previous uses. Protect the removed & segregated topsoil from wind & water erosion & from acid or toxic materials; cover, bury, impound or otherwise contain radioactive material; conduct contouring operation to achieve planned use; backfill; grade & replace topsoil or approved subsoil; replace vegetation, prevent pollution of surface and subsurface waters; and reclaim affected land as mining progresses in conformity with the approved reclamation plan.	Yes, all lands.

INTERRELATIONSHIPS

43 CFR 3809 Regulations Proposed in 1976

Regulations to manage surface disturbance from mining activities on public lands under the U.S. Mining Laws were initially proposed on December 6, 1976. Because of the substantial public comment received on the regulations, further action on their approval was suspended. The currently proposed 43 CFR 3809 rulemaking is similar to the earlier version, but incorporates a number of the many suggestions received during the public review period. The 1976 proposed rulemaking is included in this EIS as Appendix III, and as Alternative B.

Forest Service Mining Regulations

Regulations to protect the surface resources on National Forest System Lands from adverse impacts to those resources caused by mineral activities were promulgated by the Forest Service on September 1, 1974 (36 CFR 252). These regulations apply to the 140 million acres of National Forest subject to location and entry under the mining laws. The Forest Service regulations were used as a model for both the 1976 and current 43 CFR 3809 rulemaking, and are included in the EIS as Appendix II. Because they represent a slightly different administrative approach to surface resource management, the Forest Service regulations are also included in the EIS as an alternative to the current proposal (Alternative A).

Wilderness Study Area Regulations (43 CFR 3802)

Section 603(c) of FLPMA requires management of the public lands in a manner that will not impair the suitability of qualified areas for preservation as wilderness. FLPMA further mandates an inventory of the public lands, and the subsequent selection of Wilderness Study Areas (WSA's) as candidates for possible designation as Wilderness under the Wilderness Act. Because the regulation of mining operations in WSA's will necessarily be more restrictive than that applying to other areas of the public lands, and because of the need to have immediate protection of wilderness values, provisions of the regulatory proposal that apply to WSA's were expedited as 43 CFR 3802. These latter regulations were proposed on January 12, 1979 (43 F.R. 2623), and published as interim final rulemaking on March 3, 1980 (45 F.R. 13968). They are included in the EIS as Appendix IV.

The 3802 regulations employ the "impairment" concept and have stringent reclamation requirements. The impairment concept uses a strict reclamation definition such that "...the effects of the activity shall be rehabilitated to the point of being substantially unnoticeable and damaged environmental systems returned to essentially the conditions that existed on the effective date of these regulations or on October 21, 1976, for operations already in motion." (43 CFR 3802.0-5 d.)

Reclamation requirements are more stringent due to the restrictive wording of the Wilderness Act of 1964 and Section 603 of FLPMA. For example, ordinarily, a stable high wall may remain to preserve evidence of mineralization. However, that same high wall in a WSA must be reclaimed to a point of being substantially unnoticeable, unless the operations are "grandfathered" or the claimant demonstrates a valid existing right. Another example is that introduced species may be approved for most of the public lands, however, in WSA's or designated "Wilderness Areas," only species that already exist in the area are allowed for revegetation purposes.

The 3809 regulations imply and recognize that all phases of mining activity may necessarily damage the environment to some degree, but they provide the authority to prevent unnecessary or undue degradation of the public lands. Depending on the extent of surface disturbance, the 3809 regulations require reasonable reclamation to the point of restoring reshaped lands by replacement of top soil, revegetation where feasible, and retention of a stable highwall (upon approval of the authorized officer under certain conditions per 43 CFR 3809.05,2A,B,C). These conditions are obviously less stringent than rehabilitation "to the point of being substantially unnoticeable" as stipulated in 3802.

Section 603(c) of FLPMA dictates that mining may continue but only in a way that will not "impair the suitability for preservation as wilderness." However, the Act also dictates that uses existing on the date of the Act (October 21, 1976) may continue in the same manner and degree, and that valid existing rights may be exercised even if those activities are impairing the area's suitability for preservation as wilderness.

The manner and degree of a mineral use refers to the kind of physical and aesthetic impacts the grandfathered use caused as of October 21, 1976. Continuation of a grandfathered mineral use in the same manner and degree may allow a logical progression of activity--a geographic extension of the existing activity, or a change in the type of activity--if continues at a logical pace and if the new impacts are not of a significantly different kind than the impacts existing on October 21, 1976. It is the kind of impact, rather than the quantity of impact or the stage of development, that determines manner and degree. A "grandfathered" mineral use outside the boundary of an area under wilderness review may continue in the area as long as the activity follows the logical pace and progression of development and it's impacts are not significantly different.

--Valid Existing Rights on Lands under Wilderness Review

All mining claimants who located claims on or before October 21, 1976, and are able to demonstrate a discovery as of that date, as required under the 1872 Mining Law, will be allowed to continue their mining operations to full development even if the operations are causing or will cause impairment. Before BLM will grant approval of such operations, the operator will be required to show evidence of such discovery.

Reasonable access to pre-FLPMA valid mining claims will also be granted. Such access shall be regulated to prevent or minimize impairment of the area's wilderness suitability, to the extent possible consistent with the enjoyment of the claimant's rights. Mineral patent applications on these pre-FLPMA valid claims will continue to be processed. Unpatented mining claims located on or before October 21, 1976, that do not establish a valid existing right by demonstrating a "discovery" on the above date will be allowed to continue in the same manner and degree if in fact, a physical impact had been evident as of October 21, 1976. (See "grandfathered rights", Wilderness Interim Management Policy (December 12, 1979).)

--Claims Located after October 21, 1976 on Lands under Wilderness Review

Lands under wilderness review will continue to be subject to location under the mining laws. Location methods and subsequent assessment work will be restricted to operations which the BLM determines satisfy the nonimpairment criteria. Work towards post-FLPMA discoveries may take place, but not to the extent that impairment is caused. If discoveries are made in a nonimpairing manner or claims located after October 21, 1976, patents may issue.

--Assessment Work on Lands under Wilderness Review

Assessment work will be permitted only if the BLM determines that it satisfies the nonimpairment criteria. However, assessment work on claims which qualify under valid existing rights or the grandfather concept may, in fact, impair.

If proposed assessment work would impair the area's suitability for preservation as wilderness, a deferment of annual assessment work, under 30 USC 28b, may be granted for a period of one year which may be renewed for a further period of one year if justifiable conditions exist. Such deferred assessment work must be made up in the assessment year following the cessation of the legal impediment (or expiration of the deferral) along with the work for that assessment year. At the end of that period, the mining claimant must find other ways of completing nonimpairing assessment work, such as the geological, geochemical, and geophysical work allowed by the Act of September 2, 1958 (30 USC 28-1).

--Determination of Impairment on Lands under Wilderness Review

If the Wilderness Study Area (or inventory unit) is smaller than 5,000 acres, all mining activities under the 1872 Mining Law will be exempt from the nonimpairing standard, and will be regulated only to prevent unnecessary or undue degradation of the lands (43 CFR 3809).

In all cases the determination of impairment will be made only after an environmental assessment has been made by an interdisciplinary resource team and approved by the authorized officer. The authorized officer will be in most cases, the district manager.

Mining operations will be considered non-impairing if BLM determines that there will only be temporary impacts that will be reclaimed to the point of being substantially unnoticeable by the time the Secretary of the Interior is scheduled to make a recommendation to the President on the suitability of a Wilderness Study Area for inclusion in the National Wilderness Preservation System, or the impacts have not degraded wilderness values so far, compared with the area's values for other purposes, as to significantly constrain the Secretary's recommendation with respect to the area's suitability for preservation as wilderness.

CHAPTER 2

DESCRIPTION OF THE EXISTING ENVIRONMENT

INTRODUCTION

Implementation of the proposed regulations will affect the minerals industry operating under the Mining Laws, and the natural environment traditionally presented in impact statements. Discussion of the first includes generalized descriptions of various on-the-ground activities necessary for locating and developing mineral deposits.

There are basically two types of mineral locations--lode or placer. Lode claims are those located for minerals or mineralized zones found in a vein-type structure with well-defined boundaries. Usually, the longer sides of a lode claim are parallel to the vein or lode and limited to 1,500 feet in length with the shorter sides limited to 600 feet. Placer claims are those located for unconsolidated, disseminated or bedded deposits, are generally located by legal subdivision, and are limited to 20 acres per locator. Several locators may jointly locate placer claims; however, the maximum areas for such "association placers" is 160 acres for eight persons. FLPMA required the recording of all mining claims with BLM by October 22, 1979. Prior to enactment of FLPMA, recordation of mining claims and affidavits of annual assessment work were filed at county courthouses. By FLPMA's statutory deadline, 1,087,036 mining claims were filed. As of June 30, 1980 the figure increased to 1,217,295. Since the size of claims and types of mining operations vary, the extent of surface disturbance and mining activity on BLM administered land remains unknown. It is estimated that approximately 35% of the claims filed are located on lands administered by the U.S. Forest Service, and lesser numbers are located on lands administered by the National Park Service and Fish and Wildlife Service.

Description of the existing natural environment must be presented in a broad and generalized manner since BLM administers about 447 million acres. Impacts resulting from past and present minerals activity are also discussed as a part of the existing environment. The Mining Laws of 1866, 1870 and 1872 were passed with the intent to promote development of mineral resources; the laws included no specific provisions for protective measures or rehabilitation of public lands covered by mining claims or mineral patents. Almost any phase of mining--prospecting, discovery, location, development, extraction, assessment, etc.--may change the earth's surface. Consequently, adverse results have been both unsightly and potentially hazardous. Landscapes have been scarred by bulldozer cuts, holes, subsidence, open pits and mine shafts, waste material dumps, tailings, erosion, flooding and so on.

MINERALS INDUSTRY

This discussion of the mining industry in States subject to the General Mining Law of 1872 is organized into two parts; mining operations, and mineral production.

Mining Operations

All aspects of mining activities may vary considerably depending on such things as terrain; size and type of deposits; and background and financial status of the locator. Mining operations of locatable minerals comprise four basic activities:

1. Prospecting includes aerial or ground reconnaissance activities which may lead to the discovery of a potential mineral deposit;

2. Exploration refers to activities taken to confirm the presence and to determine the quality and quantity of the mineral deposit;

3. Mining includes activities for extraction of ore and may include milling (beneficiation), smelting and refining; and

4. Reclamation includes backfilling, stabilizing tailings, recontouring and revegetation.

The actions may take place concurrently so it is often difficult to define a specific procedure as belonging to one or another activity.

-- Prospecting

Usually, the work of a prospector or independent geologist involves ground or aerial reconnaissance. An individual prospector may prospect localized areas with which he is familiar. Only in special situations is physical work, such as detailed sampling and drilling, done. Where an individual prospector controls a large prospect, he may not have the means with which to explore in detail. However, prior to soliciting interest of a mining company, a sufficient prospect must be shown.

Mineral activity usually starts with aerial and/or surface prospecting. A prospector enters an area for the purpose of finding and examining outcrops indicating mineralization. Normally the prospector uses vehicles such as pickup trucks or four-wheel drive units. Occasionally a helicopter may be used. If mineralization is found to be of sufficient character for further interest, then mining claims are located. At this point the extent or quality of mineralization is not known. Therefore, the usual practice is to blanket the area using common corner posts with edge-to-edge claim lines or a slight overlap to prevent fractions from being located within the working area.

The area selected for detailed work usually includes additional ground outside the area of actual interest. This surrounding ground may not be concentric to the prime target area. A total of less than a square mile to as much as 10 square miles of land may be involved, depending upon the type of mineralization being explored. For example, the area required for a small high-grade mercury or gold prospect may consist of 10 to 100 acres, a massive sulphide base metal prospect a square mile or more, and a major uranium deposit may require acquisition of several square miles of property. The purpose of staking a larger area is to be certain of including the entire valuable mineral deposit--if one exists. This is done in an attempt to ensure that others cannot claim locations which could become expensive nuisances. Once the deposit is defined, barrier claims may be dropped through neglect of annual assessment work.

-- Exploration

Following claim location, the prospector or prospecting company usually begins the real search for mineral deposits. This may be referred to as the exploratory phase, mineral exploration, or simply exploration, and includes drilling, trenching, or shaft sinking and drifting.

For the small operator, detailed work usually consists of examining the exposures and samplings with a minimum amount of earth or rock moving using hand tools. On occasion a small explosive charge may be used. Depending on the minerals sought, a geiger counter, scintillometer, or a black light may be used. All are hand carried. The small operator seldom uses other geophysical equipment like a seismograph, gravitometer or magnetometer because of the cost and lack of familiarity with this equipment. The second step involves drilling, or stripping to find or develop an ore body.

The large operator, usually representing a large mining company, starts by claim location or purchases existing claims. He will be more likely to survey the claims, make a geologic map, and do more sampling. The large operator may also use appropriate or useable geophysical methods. Many mining claims are not developed or maintained beyond the prospecting or minimal exploration stage. Individual prospectors or claimants can rarely afford sophisticated exploration methods or the costs of mine development and often sell their prospects to larger companies. Many small and often large mineral deposits are discovered by individual prospectors or small mining companies. Prospecting and exploration efforts of the small miner play a significant role in the mineral industry. Regardless, only one percent of the total number of claims are actually mined, provided the GAO ratio 1/ of mined claims to total claims (one percent) holds true.

1/ Modernization of 1872 Mining Law Needed to Encourage Domestic Mineral Production, Protect the Environment, and Improve Public Land Management: General Accounting Office, Report to Congress, B118678, July 1974.

During the exploration stage, the operator begins to determine whether or not a valuable mineral deposit has been found. Drilling is most often an important part of these operations. The most commonly used drills utilize air and water circulation to remove cuttings, with most air drills using a cyclone separator to catch and precipitate the cuttings. Most exploratory drill holes range from 2 to 4 inches in diameter, depending on the deposit being drilled. Some cuttings may be left at the drilling site or used to refill the hole unless otherwise needed for testing. Cores and cuttings are usually taken away from the site. The mud from water circulating drills is usually dumped on the ground, into mud tanks, or back into the hole. Holes in bedrock are usually left open or capped in cases where the operator may want to reenter at a later date. Holes drilled into sediment or bedded deposits may or may not be refilled.

Most states have laws which specify how drill holes will be plugged. Auger drills are especially useful in sampling bentonitic clay deposits and churn drills are useful in sampling gold placer deposits. A small operator may not do as much drilling as larger companies because of costs, but may start a drift, incline, or shaft sooner. If an ore body of sufficient quantity and quality is found, production may be started sooner. The larger operators generally "drill out an ore body" (determine an ore body's nature and extent by exploratory drilling) before going underground. In open pit mining, knowledge of the ore body boundaries and overburden conditions are necessary for mine planning.

After the exploration phase provides a general idea of the shape, size, geological characteristics, and average grade of the ore deposit, data from feasibility studies are thoroughly analyzed and a mining plan is developed. The plan must precede actual mining operations. The various methods involved in mine development, and the emphasis given to them, depend to a large degree upon the type, size, and attitude of the ore body. Generally, the mine development stage confirms exploration data and determines the nature and extent of workings needed for full mine operation. Thus, mine development may include additional drilling, development shafts or adits, new or upgraded access, power supply or communication, and mine site preparation.

-- Mining

Mining activities usually include up to four steps of mineral recovery and extraction: (1) mining or extraction of the ore, (2) mineral dressing or beneficiation (often called milling), (3) smelting, (mainly for metals) and (4) refining. Presently there are no smelters or refining operations on public lands and the possibility of any is remote. Normally, a group of millsites are located and patented as early as possible. Refining is often done centrally for several smelters, resulting in fewer refineries. Because of high plant investment, both are limited in number and are often far from the mine itself. Therefore, this discussion is limited to the first and second steps of mineral recovery and extension.

Basically, the two types of mining are underground and surface. As expected, underground mining generally involves less surface disturbance than surface mining. Surface evidence of underground mining usually includes headframe, storage areas, dumps, portals or shafts, haul roads and often small buildings used for shops, equipment storage and living quarters. Larger operations may have a more extensive building area and haul system.

Underground mining generally removes the mineralized vein or lode from the surrounding country rock. Mineable veins may vary in width from 4-20 feet and greater. The mining is usually done in very competent rock (as opposed to underground coal mining) and therefore usually creates no noticeable subsidence of the surface. Underground block caving of ore deposits does, however, create significant local surface subsidence. Block caving is most commonly used for deposits consisting of rock of low competence, such as in copper porphyries.

Waste rock may be used to fill mined-out areas or may be dumped outside the surface openings, either stacked or on hillsides. The amount of waste rock and method of disposal depend on a variety of underground mining methods. Advanced technology and the use of large, efficient earthmoving machinery have made it possible to surface mine many deposits that would not be economic to mine by underground methods.

Surface mining involves primarily the work required to expose the ore and make it accessible for mining in quarries, open pits, and strip mining areas. This entails the initial removal of part of the non-mineralized overburden to expose a sufficient quantity of ore and enough working room to permit ore extraction. The amount of overburden that must be removed before ore can be extracted is determined by the grade, tonnage, shape and depth of the ore deposit. Overburden to be removed before ores can be produced may be appreciable where the top of

the ore body is significantly below the ground surface. (Many millions of tons of waste materials may be involved.) There is often an ultimate limit to the size of the pit that is determined more by the economics of removing overburden than a sudden change in the ore deposit from mineral to nonmineral bearing material. The ultimate pit limit and the slope of the pit walls are therefore determined as much by economics and engineering as by geological structure.

Another important part of open pit development, indeed virtually all mining development, is the development of dumps of waste rock and sub-economic mineralized rock, and construction of ponds for containing the slurry waste from milling and/or smelting the ore. Where mining occurs in mountainous areas, the waste, commonly from underground mines, may be deposited on hillsides. This keeps the material from blocking or contaminating streams in the valleys. Mill tailings ponds are constructed on valley floors in such a manner as not to affect streams. On more level land, the dumps are built up as neatly designed hills, typically to a height of 50 to 75 feet. Ponds must be constructed where the topography and economics permit. In any case, land beneath the dumps are lost to production, unless value is shown to be great enough to remove the waste material to an alternate site. In some cases, ore may be left unmined in spots extending too deeply beneath waste (USDA, INT-35). Overburden is usually piled close to the actual operation to minimize haulage costs. Some state laws require the separation of topsoil from waste overburden.

Although there are many variations in surface mining methods, two major methods in addition to open pit, quarry and strip mining, are placer and leach mining. Placer deposits are concentrations of heavy minerals, usually within loose alluvium that can easily be excavated and washed. Placer minerals such as gold, tin, and tungsten minerals, are of relatively high value, but the value of the placer gravel itself may be very low, often less than a dollar per cubic yard. The bulk of placer mining involves panning, sluicing, dredging and hydraulicking.

Leaching or solution mining techniques are used for extracting soluble ores such as copper and uranium in situations where conventional mining methods might not be economic. Total solution of all the mineral is not always accomplished.

In applying methods of solution mining to traditional ores such as the base and precious metals, subsidence will not be as important as surface disturbance, for the metal taken into solution is a minute portion of the total rock matrix. It has been suggested that some zones of lowgrade mineralization might be leached in place. There is particular interest in copper and gold ores, which have long been leached using "vat" processes, and uranium, which is easily taken into solution in a number of solvents (USDA, INT-35).

Beneficiation plants or mills concentrate the minerals in order to cut the cost of shipping and smelting, and to separate minerals into different saleable products. Mills are usually located at the mine mouth or nearby on millsite locations to reduce transportation costs. The main exception to this is uranium milling where the ore is often hauled considerable distance to the mills by truck. The uranium mill products are shipped directly to refineries bypassing the smelters. The milling site is an area of intensive use. It will have the mill itself, offices, shops, storage areas, ore stockpiles, tailings ponds, and tailing piles.

-- Reclamation

In recent years, the passage of Federal, State and local laws concerning the environmental impacts of mining have made reclamation and environmental protection measures a part of mining. All mining operations must comply with Federal regulations pursuant to such legislation as the Clean Air and Federal Water Pollution Control Acts as amended and are regulated in varying degrees by State mining and environmental quality departments. (See Table 1-2.) Many States require submission of mining and reclamation plans and adherence to guidelines for waste and overburden storage, revegetation, highwall height, dust control, etc. As a general rule, large mining operations in most states are required to reclaim mined lands. The Department's position is that reasonable reclamation should be completed on disturbed sites.

Mineral Production

Production of locatable minerals from the public lands has contributed significantly to the security and economic well-being of this Nation. Much of this mineral production has been taken from the Western States and Alaska (Table 2-1) where approximately 60% of the 447 million acres owned by the Federal Government is open to location. Nearly one-third of all metallic and non-metallic minerals produced in this country in 1977 came from present and former Federal lands.1/ Included in this number are the many mines now located on private western lands that have passed into private ownership through location on Federal land under the Mining Law. Since the bulk of known deposits of a majority of non-metallic minerals have been found in the Western States, Federal lands in this region are expected to continue as an important source of these materials.

In addition to meeting National needs, domestic mineral operations provide benefits to local and regional economics in the form of employment opportunities and expansion of the tax base.

1/ Source: USDI, Draft Report on the Issues Identified in the Non-fuel Minerals Policy Review, August 1979.

TABLE 2-1

MAJOR LOCATABLE MINERAL PRODUCTION BY STATE, 1977 and 1978 1/

State Minerals	1977 Quantity	1977 Value (Thousands)	1978 P/ Quantity	1978 P/ Value (Thousands)
Alaska				
Gold (Troy ounces)	18,962	2,812	18,652	3,610
Arizona				
Copper (Short tons)	923,778	1,234,168	971,595	1,288,335
Gem stones	NA	4,500	NA	5,000
Gold (Troy ounces)	90,167	13,373	90,220	17,384
Gypsum (Thousand short tons)	187	775	202	1,226
Lead (Short tons)	318	195	460	313
Molybdenum (Thousand pounds conc)	34,574	120,497	33,029	150,142
Silver (Thousand troy ounces)	6,828	31,546	6,471	34,943
Zinc (Short tons)	4,308	3,013	NA	NA
California				
Asbestos (Short tons)	76,247	18,372	68,992	17,402
Boron (Thousand short tons)	1,469	236,163	1,520	260,000
Gold (Troy ounces)	5,704	846	4,560	879
Gypsum (thousand short tons)	1,629	8,500	1,590	9,323
Mercury (76 pound flasks)	940	128	NA	NA
Silver (Thousand troy ounces)	58	268	58	314
Talc (Short tons)	95,602	2,373	109,816	5,630
Colorado				
Copper (Short tons)	1,896	2,533	1,405	1,863
Gold (Troy ounces)	72,668	10,777	31,400	6,050
Gypsum (Thousand short tons)	211	1,121	215	1.315
Lead (Short tons)	22,994	14,118	18,030	12,260
Molybdenum (Thousand pounds conc)	74,740	276,538	84,060	377,768
Silver (Thousand troy ounces)	4,663	21,545	4,025	21,737
Zinc (Short tons)	40,267	27,704	28,175	17,468
Tungsten (Thousand pounds)	2,253	15,544	2,306	15,826
Uranium (Thousand pounds conc)	2,072	33,411	2,633	28,691
Vanadium (Thousand pounds)	9,631	25,041	8,176	5,828
Tin (thousand pounds)	171	749	157	956
Idaho				
Copper (Short tons)	4,052	5,413	4,075	5,404
Gold (Troy ounces)	12,894	1,912	19,500	3,757
Lead (Short tons)	47,258	29,016	47,285	32,154
Silver (Thousand troy ounces)	15,292	70,649	18,051	97,478
Zinc (Short tons)	30,998	21,327	34,990	21,694

Table 2-1 (Cont'd)

MAJOR LOCATABLE MINERAL PRODUCTION BY STATE, 1977 and 1978 1/

State	1977		1978	
Minerals	Quantity	Value (Thousands)	Quantity	Value (Thousands)
Montana				
Copper (Short tons)	86,203	115,167	75,108	101,200
Gold (Troy ounces)	22,348	3,314	18,510	3,567
Lead (Short tons)	106	65	140	95
Silver (Thousand troy ounces)	3,367	15,568	2,930	15,826
Talc (Thousand short tons)	226	2,947	280	6,037
Nevada				
Barite (Thousand short tons)	1,158	18,329	1,788	30,034
Copper (Short tons)	67,061	89,593	20,453	29,986
Gold (Troy ounces)	324,003	48,053	260,895	50,496
Gypsum (Thousand short tons)	1,242	6,834	1,335	7,883
Lead (Short tons)	743	456	720	485
Molybdenum (Thousand pounds conc)	NA	NA	99	469
Mercury (76 pound flasks)	27,308	3,700	24,163	3,705
Silver (Thousand troy ounces)	738	3,411	804	4,341
Tungsten (Thousand pounds)	263	1,687	NA	NA
Zinc (Short tons)	1,672	1,150	1,511	937
New Mexico				
Copper (Short tons)	164,698	220,037	139,645	185,169
Gold (Troy ounces)	13,560	2,011	10,100	1,946
Gypsum (Thousand short tons)	182	1,227	265	3,057
Perlite (Short tons)	521	9,543	548	12,382
Silver (Thousand short tons)	918	4,242	902	4,871
Uranium (Thousand pounds conc)	13,167	260,037	16,000	278,400
South Dakota				
Gold (Troy ounces)	304,846	45,212	285,512	55,261
Utah				
Copper (Short tons)	194,130	259,357	208,580	276,577
Gold (Troy ounces)	210,501	31,219	241,000	46,438
Gypsum (Thousand short tons)	324	2,510	318	1,969
Iron ore (Thousand long tons)	1,932	19,780	2,040	22,513
Lead (Short tons)	10,746	6,598	2,820	1,918
Silver (Thousand troy ounces)	3,283	15,179	2,827	15,269
Zinc (Short tons)	17,759	12,218	3,850	2,387
Molybdenum (Thousand pounds conc)	6,849	25,204	9,720	43,934

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TABLE 2-1 (Cont'd)

MAJOR LOCATABLE MINERAL PRODUCTION BY STATE, 1977 and 1978 1/

State	1977		1978	
Minerals	Quantity	Value (Thousands)	Quantity	Value (Thousands)
Wyoming				
Gypsum (Thousand short tons)	356	2,571	429	2,657
Uranium (Thousand pounds)	9,857	194,682	12,000	208,800
Iron Ore (Thousand long tons conc)	2,525	NA	2,640	NA
Bentonite 2/ (Thousand Short tons)	2,762	47,076	3,452	66,400

1/ Source: Bureau of Mines, State Mineral Profiles, 1979.

2/ Locatability usually depends on physical and chemical properties.

3/ Source: Skillings Mining Review, July 8, 1978; July 7, 1979.

P/ Preliminary

Areas of concentrated mineral activities or mining claims (usually geographic units) are often referred to as "mining districts." Examples of such areas are the Globe-Miami area of southern Arizona, the Mineral Hill area of northern Utah, the Colorado Plateau area in Utah and Colorado, the Summit Hill (Butte) area in Montana, and the Kramer area in southern California. A total of 4,338 such mining districts and mineral deposits of the Western States was identified by Charles A. Mardirosian in 1977 on a composite map, "Mining Districts and Mineral Deposits of the Eleven Western States."

Intensive mining operations in these mineral areas often result in the movement of population into these areas. As the population increases, there will be continued pressure by competing users of the land for its available resources, including minerals. Although many of the mineralized areas of the western United States have already experienced major development, some areas of mineral potential are yet to be explored and mined.

In general, the overlying social and economic situation that often results from significant mineral activity cannot be identified as resulting from any one activity. However, the mining aspect is probably the most dominant. Although most locatable mining activities on public lands are small-scale production, socioeconomic impacts which may result from significant mining activity include, but are not limited to:

- Potential economic stimuli with resulting commercial and industrial expansion;
- Increased tax base to finance public projects;
- Stress on utility and fuel supplies;
- Improved transportation (rail, shipping lines) systems for bulk products;
- Influxes of population associated with construction phases that may cause temporary shortages and problems for local planning and zoning commissions;
- Expansion of employment and personal income which may alleviate local unemployment and poverty; and
- Availability of domestic raw materials thereby lessening U.S. dependence on foreign imports.

Import Reliance

Table 2-2 lists, for selected mineral commodities, the Nation's import reliance as a percent of consumption in 1979, along with primary source nations for these products. The table shows United States dependence on foreign supply sources for a number of important metals and minerals. While these sources of minerals supply have been dependable in the past, events of the last decade have introduced uncertainty that future United States demand will be routinely met by foreign producers. The U.S. role in the world minerals market has shifted during this period from one of dominance to one of interdependence. This has evolved as lesser-developed countries have begun to use their rich mineral resources to achieve political as well as economic objectives. The result is a variable international market structure in which the potential for supply disruptions or manipulation through cartel-type arrangements must be recognized.

The U.S. has done little to counter this potential threat to its non-fuel minerals supply. In the years following passage of the Mining and Minerals Policy Act of 1970, the Government adopted environmental, land-use, and health and safety measures which have increased the costs of mining and mineral processing in the United States. While the legislative initiatives that introduced these controls were then appropriate, subsequent lack of a consistent and clearly defined National minerals policy has made it difficult for Federal agencies to make the necessary trade-offs among conflicting mandates. Many of the Federal actions that were taken have served cumulatively to discourage domestic minerals exploration and production, shifting investments toward more favorable foreign ventures.

NATURAL ENVIRONMENT

Under present mining practices, the quality of the natural environment (soil, water, air, forage, timber, etc.) has, in many cases, experienced deterioration. Ultimately, the general public must bear a part of the social costs of production, such as a loss or reduction in air and/or water quality, visual or aesthetic losses in the natural landscape, and safety hazards, etc. In other instances, specific ecosystems such as raptor nesting areas or wildlife habitat areas may suffer temporary or permanent disruption.

The environment affected by the implementation of the proposed action presently exists for the 19 states (table 1-1) subject to the Mining Law of 1872. It varies from the mountains and tundra of Alaska to the deserts of the Southwest and includes the forested areas of the Northwest, the Rocky Mountains, and the prairies of eastern Montana, Wyoming, and Colorado.

The states subject to the General Mining Law are Alaska, Arizona, Arkansas, California, Colorado, Florida, Idaho, Louisiana, Mississippi,

Map 2-1

Legend

LANDS MANAGED BY BLM

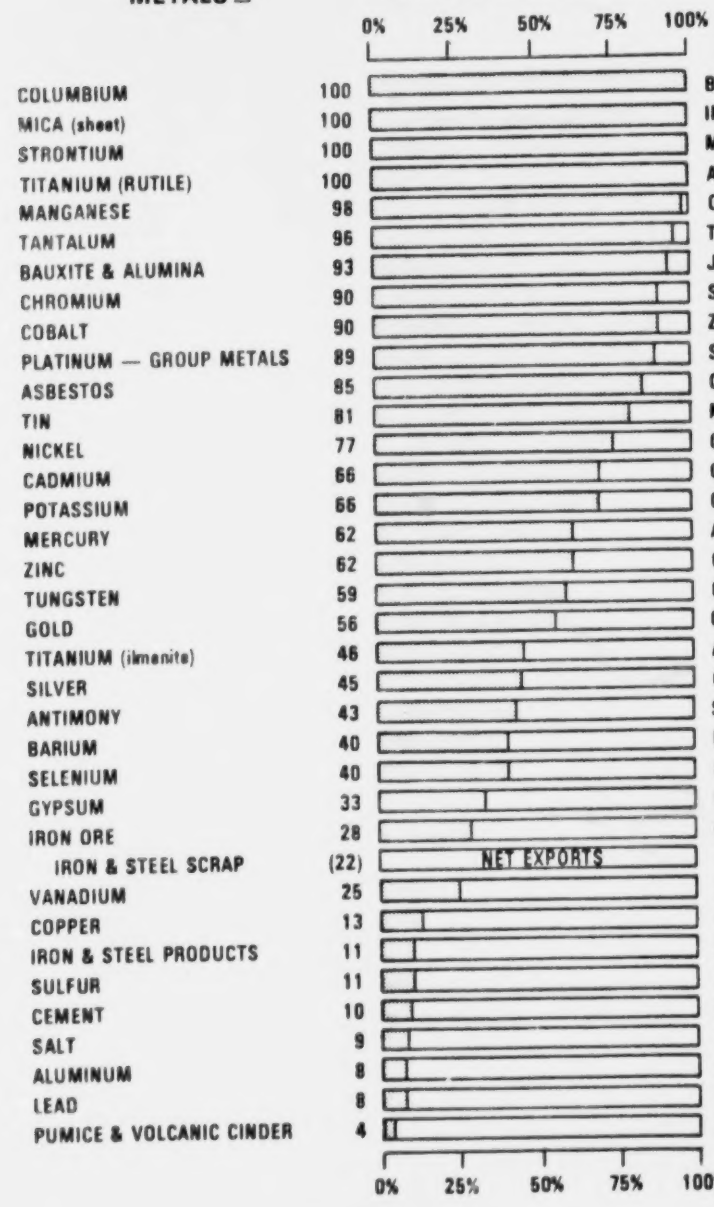
THE PUBLIC LANDS IN THE WESTERN STATES

United States Department of the Interior

Bureau of Land Management

TABLE 2-2

U.S. NET IMPORT RELIANCE OF SELECTED MINERALS AND METALS AS A PERCENT OF CONSUMPTION IN 1979


MINERALS AND METALS 1/
NET IMPORT RELIANCE* AS A PERCENT OF APPARENT CONSUMPTION**
MAJOR FOREIGN SOURCES 2/ (1975-1978)
0% 25% 50% 75% 100%
COLUMBIUM 100 BRAZIL, CANADA, THAILAND
MICA (sheet) 100 INDIA, BRAZIL, MADAGASCAR
STRONTIUM 100 MEXICO, SPAIN
TITANIUM (RUTILE) 100 AUSTRALIA, JAPAN, INDIA
MANGANESE 98 GABON, SOUTH AFRICA, BRAZIL, FRANCE
TANTALUM 96 THAILAND, CANADA, MALAYSIA, BRAZIL
BAUXITE & ALUMINA 93 JAMAICA, AUSTRALIA, GUINEA, SURINAM
CHROMIUM 90 SOUTH AFRICA, U.S.S.R., S. RHODESIA (ZIMBABWE), TUR
COBALT 90 ZAIRE, BELG.-LUX., ZAMBIA, FINLAND, CANADA
PLATINUM — GROUP METALS 89 SOUTH AFRICA, U.S.S.R., UNITED KINGDOM
ASBESTOS 85 CANADA, SOUTH AFRICA
TIN 81 MALAYSIA, THAILAND, INDONESIA, BOLIVIA
NICKEL 77 CANADA, NORWAY, NEW CALEDONIA, DOMIN. REP.
CADMIUM 66 CANADA, AUSTRALIA, MEXICO, BELG.-LUX.
POTASSIUM 66 CANADA, ISRAEL
MERCURY 62 ALGERIA, SPAIN, ITALY, CANADA, YUGOSLAVIA
ZINC 62 CANADA, MEXICO, SPAIN, HONDURAS
TUNGSTEN 59 CANADA, BOLIVIA, REP. OF KOREA
GOLD 56 CANADA, SWITZERLAND, U.S.S.R.
TITANIUM (ilmenite) 46 AUSTRALIA, CANADA
SILVER 45 CANADA, MEXICO, PERU, UNITED KINGDOM
ANTIMONY 43 SOUTH AFRICA, BOLIVIA, CHINA MAINLAND, MEXICO
BARIUM 40 PERU, IRELAND, MEXICO, MOROCCO
SELENIUM 40 CANADA, JAPAN, YUGOSLAVIA, MEXICO
GYPSUM 33 CANADA, MEXICO, JAMAICA
IRON ORE 28 CANADA, VENEZUELA, BRAZIL, LIBERIA
IRON & STEEL SCRAP (22) NET EXPORTS
VANADIUM 25 SOUTH AFRICA, CHILE, U.S.S.R.
COPPER 13 CANADA, CHILE, ZAMBIA, PERU
IRON & STEEL PRODUCTS 11 JAPAN, EUROPE, CANADA
SULFUR 11 CANADA, MEXICO
CEMENT 10 CANADA, MEXICO, NORWAY, BAHAMAS
SALT 9 CANADA, MEXICO, BAHAMAS
ALUMINUM 8 CANADA
LEAD 8 CANADA, MEXICO, PERU, HONDURAS, AUSTRALIA
PUMICE & VOLCANIC CINDER 4 GREECE, ITALY
0% 25% 50% 75% 100%

*NET IMPORT RELIANCE = IMPORTS-EXPORTS +ADJUSTMENTS FOR GOV'T AND INDUSTRY STOCK CHANGES.

**APPARENT CONSUMPTION = U.S. PRIMARY +SECONDARY PRODUCTION + NET IMPORT RELIANCE.

1/ SUBSTANTIAL QUANTITIES ARE IMPORTED FOR FLUORSPAR, GRAPHITE, RHENIUM AND ZIRCON. DATA WITHHELD TO AVOID DISCLOSING COMPANY PROPRIETARY DATA.

2/ SOURCES SHOWN ARE POINTS OF SHIPMENT TO THE U.S. AND ARE NOT NECESSARILY THE INITIAL SOURCES OF THE MATERIAL

APRIL 21, 1980

BUREAU OF MINES, U.S. DEPARTMENT OF THE INTERIOR
(import-export data from Bureau of the Census)

Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. (See map 2-1.) The States of Arkansas, Florida, Louisiana, Mississippi, and Nebraska will be minimally affected by the proposed action because of the small acreage of public lands in these states. Because of the broad area and diverse environment (mountains, valleys, tundra, forests, and deserts) covered by the proposed action, a detailed description of the natural environment is not undertaken in this document. Summaries of these areas appear in various Department of the Interior EIS's, such as the Range EIS's prepared on a local basis and the Programmatic Federal Coal Management Program and Regional Coal EIS's.

Table 2-3 lists the impacts associated with the various phases of mining activity. Each impact is then characterized as having either a detrimental or beneficial net effect.

Climate

Climates within the area affected by the proposed action range from the sub-tropical climate of Florida to the arctic climate of northern Alaska. Nearly all the climatic regimes of typical classification schemes are represented within the continental scale study area. The impacts of mining operations on the micro-climatic scale are dependent upon the local environmental characteristics and are therefore site-specific considerations.

Air Quality

Existing air quality is described by comparing measured ambient pollutant concentrations with State or Federal ambient air quality standards for certain air pollutants designated by the Environmental Protection Agency (EPA). EPA has designated Air Quality Control Regions (AQCR's) for each state. The attainment status for each AQCR in relation to the National Ambient Air Quality Standards for each pollutant was designated by the EPA in 43 FR 8962 on March 3, 1978. This document and its revisions describe the existing air quality for pollutants addressed by the National Ambient Air Quality Standards.

The Clean Air Act, as amended in 1977, established incremental standards for the Prevention of Significant Deterioration (PSD) Classes I, II, and III. Specific areas with relatively pure air were designated Class I, and all other areas were categorized Class II. States were given the responsibility for redesignation of Class II areas to Class I or Class III. In site-specific cases, the existing PSD category and the status of redesignation of an area may provide further information on existing air quality.

Although the impacts of the proposal on air quality are considered minimal, the primary impact is caused by particulate matter introduced

TABLE 2-3

SEQUENCE OF POSSIBLE IMPACTS OF MINING ACTIVITIES 1/ 2/

PRE-MINING (Prospecting/Exploration)

1st ORDER	2nd ORDER	3rd ORDER	4th ORDER	NET EFFECT (+ = beneficial) (- = deletrious)
Access a. Road Construction	Alter land contours	May cause erosion	Siltation of nearby streams	-
	Destroy ground cover	May cause erosion		-
		Some local dislocation of wildlife		-
		Some elimination of habitat		-
	Make land more accessible to all users	Increased use of land	Greater public enjoyment of land	+
			Greater intenaity of public-use impacts	-
b. Transportation	Create noise, dust from road traffic	May disturb wildlife		-
		Some local degradation of air quality		-
Sampling a. Possible Site Clearing	Similar to road construction impacts			-
b. Drilling	Create bore holes	Potential temporary surface hazard if large enough and unplugged		-
		May result in contamination of aquifers		-
		Core information may add to Nation's resource base		+
	Produce drill cuttings	Create small waste piles on adjacent land	May affect local or downstream water quality	-
			Aesthetic degradation of land	-
c. Excavation	Alter land contours	May create surface hazards		-
		May cause erosion		-
		Aesthetic degradation		-

MINING	Structure and Facility location	Construction type impacts		-
		Dedicate land use	Precludes other uses of land	-
	Mining Recovery	Alter surface contours directly if surface mine; possible land subsidence if subsurface	Physical and aesthetic degradation of the land	-
		Create tailings or waste piles	Physical and aesthetic degradation of the land	-
			Additional land-use requirement	-
			Leachate may degrade local W.Q.	-
		Mine dewatering may lower water table	Affect local vegetation, fish & wildlife, agriculture	-
		Machinery operations and vehicular traffic	Increase noise levels	Disturb wildlife, local residents -
			Dust and spillage from haul trucks	Degrade air/water quality -
		Provide employment; economic productivity	Broaden local tax base	Improve social services +
		Help meet Nation's mineral needs	Decrease Nation's import reliance	Provide more stable source of minerals +
			Decrease unfavorable balance of payments	Acts to keep inflation down +
	Mineral Processing	Employment; economic productivity		+
		Generate waste products	Require land for impoundment, storage	-
			Susceptible to erosion. Uranium tailings present special problems	Degrade air quality, possible contamination of surface streams, ground water -
POST MINING	Inactivate or Abandon Workings	Structures, equipment left on claim	May create "attractive nuisance" hazard	-
			May impair aesthetic value of land	-
			May provide items of historic interest, recreational value	+
		Terminate minerals production	Lost jobs and local tax base	-
			No further contribution to Nation's mineral supplies	-

1/ Table assumes no impact mitigation e.g. pollution abatement, land reclamation measures. Most states enforce air/water quality standards, reclamation requirements (See Table 1- .)

2/ Impact level is generally proportional to scale of operations, but may vary considerably with specific site conditions.

into the atmosphere by offroad vehicle use. Vehicle engine exhausts contribute pollutants in total amounts which are insignificant at the level of anticipated activity. Minimal contributions may be added by the occasional use of small amounts of explosives and by the camping activities associated with prospecting. The initial use of a roadless area by prospectors may induce the secondary use of offroad tracks by vehicles not used for prospecting. The air quality above public land is intended to be protected by the PSD standards established by the 1977 Clean Air Act Amendments. Radioactive effluents to unrestricted areas are subject to limitation by the Nuclear Regulatory Commission Standards for Protection Against Radiation (10 CFR 20).

Exploration activities impact air quality locally by the introduction of particulate matter into the atmosphere by offroad vehicle use, road and drilling pad construction, and drilling operations. Carbon monoxide and hydrocarbons are produced by internal combustion engines in vehicles, and in drilling and material handling equipment.

Mining operations (including mining, beneficiation or milling, smelting, and refining) may create significant impacts upon the air quality over public lands. Relatively larger operations, usually located on patented lands, are subject to emission standards applicable to major stationary sources and National Emission Standards for Hazardous Air Pollutants. Small mining operations on public land may impact air quality. In general, these impacts occur as a result of road construction, waste rock disposal, crushing or grinding of ore, transport of ore and waste rock, and erosion of tailing piles at the beneficiation site.

Fugitive dust emissions are often indistinguishable from naturally occurring dust (background) and are often emitted as a result of the same force--wind erosion. Meteorological conditions cause large variations in emission rates due to factors such as periods between rainfall, frequency of high wind speeds, and atmospheric turbulence.

EPA studies show that three fugitive dust sources are identified to have regional impacts; agriculture, unpaved roads, and construction activities. These studies were undertaken in six AQCR's in the States of New Mexico, Nevada, Arizona and California. The six AQCR's under study were (1) San Joaquin, (2) Phoenix-Tucson, (3) Albuquerque-Mid Rio Grande, (4) El Paso-Las Cruces-Alamogordo, (5) Nevada Intrastate and (6) Northwest Nevada. The dust sources are not well-defined in area or duration of emission; some are temporary and others are seasonal.

A published EPA report indicates that approximately 63,000,000 tons of native soil enter the atmosphere as particulate matter each year in the United States as a result of surface wind action. Based on a land mass of 3,615,000 square miles, this is an average of 17.4 tons/square mile. In comparison, the fugitive dust emissions for the individual AQCR's

range from 2.3 to 44 tons/square mile. This does not appear high for areas of the country with recognized dust problems.

Agricultural emissions overshadow all other fugitive dust sources in two of the regions and are a large contributor in a third AQCR. The two regions contain some of the most intensely farmed land in the country. High emissions from farming operations indicate that, although largely ignored, agriculture may be an important source of particulates in many parts of the country.

In the other four AQCR's, unpaved roads are the largest source of particulates. For unpaved roads, the emission factor is 3.7/lb/vehicle mile; for construction, 1.4 tons/acre/month of active construction (fugitive dust from construction is prominent in regions with large metropolitan areas); and for tailings piles, 4 to 16 tons/acre/year, depending on climatic factors. Tailings piles were located in only three of the AQCR's under study--Northwest Nevada, Nevada Intrastate and Phoenix-Tucson. Phoenix-Tucson is the only area in which any other source category makes a substantial contribution to overall regional emissions. Here, tailings piles are the source of almost 22,000 tons per year, or 3.4 percent of the total particulate emissions.

Air quality impact of fugitive dust from a specific mining industry is relative to the magnitude of operations and population exposure. Western surface mines usually are in dusty remote locations, while the less dusty Midwest surface mines are often found in areas of moderate population density. Although usually found in isolated locations, there are copper mines near Tucson, Salt Lake City, and Butte. In all three cities, fugitive dust from mining has resulted in increased urban particulate concentrations.

Air quality impact of mining emissions may be attenuated by the manner of the mining taking place. For example, at some larger mines, dust-producing activities may occur in pits below surrounding ground level. Emissions from similar activities at ground level or elevated surfaces would have a greater impact on ambient concentrations. At some other large mines, property may extend for many miles from the origin of the emissions so concentrations may be negligible upon crossing property lines.

Water Resources

Water resources are not always found in adequate quantity and quality in the West. The Water Resources Division of the U.S. Geological Survey has principal jurisdiction in the collection and analysis of water data (quantity and quality). These data are published on an annual basis in the Federal-State cooperative basic-data reports of USGS (Parts I and II) and are available at any U.S. Government documents repository. No interpretations are found in these reports, only the reduced, corrected

data. In addition to the Federal-State basic-data reports, information on selected references and brief descriptions of current investigations are compiled in a U.S. Geological Survey series called Water-Resources Investigations, published for each State. These publications may be obtained from the U.S. Geological Survey, Reston, VA 22092.

Other broad summaries of the Nation's water resources may be found in Geraghty, et al, (1973) Water Atlas of the United States, the U.S. Department of the Interior's Westwide Study, and the 1977 Second National Water Assessment. In addition, the Type I Comprehensive Framework Plans conducted pursuant to the 1964 Water Resources Planning Act contain volumes of data, graphic information, and interpretations on runoff, climate, erosion, and water quality characteristics of the vast western river basins.

Climatic variations and average conditions (precipitation, temperature, wind, and evaporation) are well documented for all States in the subject area (National Oceanic and Atmospheric Administration -Climates of the States). The Water Pollution Control Act, as amended in 1977, and various state laws (refer to table 1-2) establish water quality standards for the prevention of diminishing water quality. Operators must be in compliance with Federal, State, local and international water quality requirements and must also obtain the necessary permits relating to these requirements.

Mineral activities on public lands have a variable impact on surface and groundwater quality and quantity, depending on the nature of the disturbance and local site, hydrologic, and climatic conditions. Use of offroad vehicles (ORV's) may cause increased runoff, erosion, and silt discharge to the streams. Exploration activites to quantify the size of the ore body, the mineral content, depths, etc., could have an impact on both the quantity and quality of the water resource of the area. Roads, drill pads, and other facilities may need to be constructed, which might affect water quality through increased erosion and salt pickup. It may also impact the rate and quantity of runoff.

Drilling operations could affect both surface and groundwater; surface spills of drilling chemicals could degrade water quality and groundwater impacts may result from interchange between aquifers or through release of flow from artesian aquifers.

The exchange between aquifers could contaminate good quality water by allowing inflow from a contaminated aquifer. Contamination could also occur in surface water if the polluted or low quality aquifer had sufficient pressure to cause a surface discharge. A surface discharge could cause erosion in surface channels as well as dewatering of the aquifer. Subsurface dewatering of aquifers could also take place by allowing interchange from a viable aquifer to a dry geologic formation capable of transmitting or storing water. Development of subsidence

fractures during or after subsurface mining operations may provide avenues for pollutants to reach groundwater.

Mining operations may have adverse impacts on the downstream environment and on overall water quality. Impacts result from water draining from newly opened or abandoned mines and leaching of dissolved metals and salts from mill tailings. Solid particulate matter may be introduced in sizes ranging from fine silt to sand, and consisting of relatively inert material, although chemical reactions may convert some or all of it to more soluble chemical compounds. Radioactive material may be involved in some cases, and organics may be introduced into surface waters. Mine waters are often "acid" because of the common association of the iron sulphide pyrite with most metal ores and many solid fuels. Pyrite, as well as a number of other ore and gangue minerals, decomposes when it comes in contact with moisture and air, producing sulphuric acid. The acid mine water then has the ability to take other pollutants into solution. In addition, dissolved metals and salts, in highly toxic solutions, are sometimes found leaching from mill tailings. Modern practice is to confine this material (USDA, INT-35).

Soils

Soils of the western United States and Alaska are widely variable due to differences in climate, topography, vegetation, geology, and time in place. Only those soil characteristics that greatly affect potential for mined land reclamation are discussed. They will be viewed in the broadest sense, rather than in terms of slope, permeability, fertility, etc. The discussion centers around the problems of reclamation that can be expected in an area.

A soil's susceptibility or resistance to displacement is based on several factors, among which are texture, topography, climate, and the quantity and quality of the associated vegetative cover. Soil type is a function of the parent material from which the soil was formed and the weathering that the soil has undergone; thus, the same soil type can have different stability and susceptibility factors in different physiographic areas. The magnitude of the impact of mining activities on soils will vary from area to area as the type of soil, topography, and climate vary.

More detailed soils information can be found in unpublished soil survey reports in local offices of the Soil Conservation Service and Bureau of Land Management. Published and unpublished reports by the Department of Agriculture (Soil Conservation Service and Forest Service), the Department of the Interior (Bureau of Land Management and Bureau of Indian Affairs), and State Conservation offices also offer additional soil information.

The major problem soil areas within the western United States and Alaska are shown on Maps 2-2 and 2-3. Factors that greatly affect the potential for surface mined land reclamation in those regions are no

MAP 2-2

LEGEND

B	Badland	Lack of soil, toxic, erosion
H	Hot	Extreme drought, erosion
P	Sand	Wind erosion
R	Rockland	Lack of soil, toxic, erosion
S	Salts	Toxic, erosion
D	Dry	Drought, erosion

REVEGETATION

- Extremely difficult
- Difficult

SOIL

WESTERN UNITED STATES

BUREAU OF LAND MANAGEMENT

LEGEND

C1 Cold - Permafrost, erosion

C2 Cold - Discontinuous permafrost, erosion

C3 Cold - Erosion

R - Rockland

REVEGETATION

Extremely difficult

Difficult

SOIL
ALASKA

BUREAU OF LAND MANAGEMENT

soil, thin soil, drought, wind and water erosion, toxicity, and the length of the growing season.

Soil conditions that occur in Badland (B) areas are characteristically steep or very steep barren land, ordinarily not stony, and dissected by many intermittent drainage channels. Badland is most common in semiarid and arid regions (North Dakota, South Dakota, Montana, Utah, Arizona, and New Mexico) where streams are entrenched in soft geological materials. Potential for runoff is very high and geologic erosion is active. Inclusions of identifiable soils support vegetation with very limited value for grazing livestock and wildlife. Plant species that are narrow endemics (species restricted or peculiar to a locality or region) can be found here. Revegetation is limited by a lack of suitable soil materials as a plant growth medium, by toxicity (salts), and by unstable geologic material (erosion).

The soils that occur in the Hot (H) areas are characteristically subjected to long periods of drought and high daytime temperatures. These areas are common across the American Southwest (California, Nevada, Arizona, New Mexico, and in parts of the Colorado River Canyon area). These soils are very fragile and erode easily where the vegetative cover is removed or soil surfaces are disturbed by mechanized equipment. Plants and animals that are narrow endemics associated with specific geologic formations or intrusions and with water (e.g., pup fish) are found in this area.

In some areas which lack suitable soil materials or which are susceptible to toxicity (salts) or wind erosion (sand), reclamation is more difficult. Toxic precipitates penetrating soils from fumes may be widespread and long lasting depending on the time required to neutralize their adverse effects. Revegetation is limited by prolonged drought, by high temperatures, and erratic rainfall patterns and erosion.

The soils that occur in Sand (P) areas are characteristically subjected to wind erosion when the vegetative cover is removed by mechanized equipment or by overgrazing or trampling by grazing animals (livestock, wild horses and burros, and wildlife). Plants and animals that are narrow endemics associated with this geologic or soil characteristic are easily displaced or destroyed. Revegetation is limited by low water holding capacity and is susceptible to wind erosion (surface movement).

The soils that occur in Dry (D) areas are frequently subjected to long periods of drought and lower erratic rainfall. These soil areas, common in Nevada, Utah, Colorado, Wyoming, and New Mexico, are fragile and erode easily when the vegetative cover is removed or disturbed by mechanized equipment. Plants and animals that are narrow endemics associated with this specific geological material, or landform, or small bodies of water are easily displaced or destroyed. Revegetation is limited by prolonged drought, erratic rainfall patterns, and by erosion.

The soils that occur in Rockland (R) areas are characteristically lacking in suitable soil material as a plant growth medium. In some areas the surface or underground geologic material is toxic (salts) which compounds the problem of revegetation. These soils are fragile and erode easily when the vegetative cover is disturbed by mechanized equipment. Plants and animals that are narrow endemics and are associated with specific kinds of rocks are easily displaced or destroyed. Revegetation is limited by a lack of soil materials as a suitable plant growth medium. This can be compounded in areas of low rainfall.

The soils that occur in Salt (S) areas are characteristically toxic and suppress plant growth, prevent seed germination or affect seedling survival. The soil material, generally below the immediate surface (A Horizon), is unsuitable as a plant growth medium. These soils are fragile and erode easily when the vegetative cover is disturbed. Plants and animals that are narrow endemics associated with this conditon are easily displaced or destroyed. Revegetation is limited by toxics (salts), a lack of suitable topsoil and moisture, and erosion.

Soils that occur in Cold (C) areas (Alaska) are characteristically limited by short or very short growing seasons. These soils are very fragile and erode easily when the vegetative cover is removed by mechanized equipment. Revegetation is limited by the short growing season and/or unstable soil conditons (erosion).

Total revegetation is extremely difficult (hatched obliquely) in areas where prolonged drought, high temperatures and low, erratic rainfall patterns occur. Difficulty in reclamation is compounded in areas that are toxic (S), lack soils (R), lack soils and are toxic (B), or are sandy (P). All soil types are subject to accelerated wind or water erosion where the vegetative cover is removed or where surfaces are disturbed.

Revegetation is also difficult in soil areas where prolonged drought and low, erratic rainfall occurs during the growing season. (Hatched horizontally.)

In Alaska, revegetation is extremely difficult in areas (C1 and C2) north of the discontinuous permafrost line. Short and very short growing seasons prevail. When the vegetative cover is removed during the warm-up, the immediate effects are removal of soil materials through erosion and/or melting of the supporting ice (permafrost), causing surface subsidence and loss. In the cold (C3) area along the south coast, the removal of the vegetative cover opens the soils to accelerated erosion. Rockland (R) areas of Alaska are lacking in soil more so than in the lower 48 states. Ice and snow fields are common in mountain areas. The combination of lack of soil, short growing season, ice and snow makes revegetation extremely difficult to attain.

-- Environmental Impacts of Current Mining Activites

Generally dispersed over large areas, prospecting is often a one time traverse in any one area. The indiscriminate use of ORV's compact the soils, often resulting in decreased infiltration, increased erosion, and salt discharge to streams. There is a loss of topsoil and humus with increased use of existing roads and trails. Some new trails are made. To expose the mineral, there will be localized areas where topsoil is mixed with less fertile B horizon or underlying bedrock.

Offroad vehicle travel associated with mineral operations establishes access roads which may provide some protection to rangelands and woodlands by functioning as firebreaks. Depending on their location, these roads or trails also may enhance the management of livestock distribution and assist in management of habitat for wildlife in previously remote areas. In some instances, the establishment of access routes has lessened the amount of random offroad travel from other activities. Once a route has been established for mining purposes, others tend to use it for their activities, thus decreasing haphazard offroad travel.

Use of these access roads during adverse weather conditons, however, often has serious effects by increasing the destruction of vegetation and by creation of ruts which can become miniature waterways transporting sediments and salts. Road or trail locations incompatible with the ecosystems contribute to accelerated soil movement, increase runoff, and may infringe upon the habitat and security of breeding areas of wildlife.

Use of offroad vehicles for operations in areas such as the California Desert and the Alaskan tundra may result in significant localized adverse impacts which may be long lasting.

Activities to discover the magnitude of the ore body affect a larger area than prospecting. Clearing of vegetation and construction of roads, storage areas and drill pads often provide a medium for the invasion of undesirable vegetation. Increased traffic and other activities encourage the spread of these vegetative species. Improperly designed roads and drill pads accumulate heavy runoff and drifting snow thereby increasing channeling and erosion on an unprotected surface.

When shaft or drift activites are used to quantify the ore body there may be an additional loss of soil beneath the soil pile. Open cuts to expose the ore increase the loss of soil within the cut area as well as beneath the resulting spoil pile. Increased erosion may result from surface runoff. Increased sediment and salt loads may degrade downstream water quality.

During the development phase, the overall impact may be greater or longer in duration, although over a limited area. The soil surface at construction sites and at support facilities locations is compacted or

altered, thereby increasing erosion due to surface runoff during rainstorms or snowmelt. Construction of pipelines or transmission lines associated with mineral development removes vegetative cover. Severe erosion may occur when pipelines are located on steep gradients.

During the construction phase of the mine, the overall erosional impact may be greater and longer, although over a more limited area than during the prospecting phase. The soil surface at construction sites and support facilities locations is compacted or altered, increasing erosion due to increased surface runoff or snowmelt. The construction of utilities through corridors removes vegetative cover and may cause severe erosion when these lines are located on steep gradients. Open pit mining increases the loss of soil over larger areas than does underground mining.

The effects of soil erosion, including those caused by water and wind, are: (1) removal of topsoil necessary to sustain present and future natural and domestic vegetation growth, agricultural crops, adequate wildlife habitat, and forests; (2) acceleration of siltation of streams; and (3) increased turbidity and salt loading (which may destroy aquatic insects and other fauna and flora low in the food chain and their habitats). This would interfere with fish respiration and reproduction, and increase water temperature.

Vegetation

Biomes are major biotic communities, or natural groups of organisms, characterized by certain "dominant" and "influent" plants and animals. The surface environment of the five major biomes in the Western United States is described in this statement.

There are numerous species of plants within these biomes including 20 endangered and 2 threatened plant species that have been officially listed in the Federal Registers dated April 26, 1978, August 11, 1977, and September 28, 1978. Plant species proposed for official threatened or endangered species status are listed in the Federal Registers dated Tuesday, July 1, 1975 and Wednesday, June 16, 1976. An attempt has been made to indicate the boundaries between the biomes. However, the biomes are really separated by ecotones (transitional zones) where elements of adjacent biomes blend. The locations of the biomes are shown in Maps 2-4 and 2-5.

The five biomes described in this statement include both aquatic and terrestrial communities. They also contain biological islands more characteristic of other biomes. The islands are caused by geographical, climatic, altitudinal, and other variations within the broad areas delineated on the maps. Biomes described are the (a) Grassland, (b) Desert, (c) Woodland-bushland, (d) Coniferous forest, and (e) Tundra. Three of the subbiomes, the Taiga Coniferous Forest, the Northwest

MAP 2-4

BIOMES OF THE WESTERN UNITED STATES

LEGEND

BIOMES IN THE WESTERN UNITED STATES

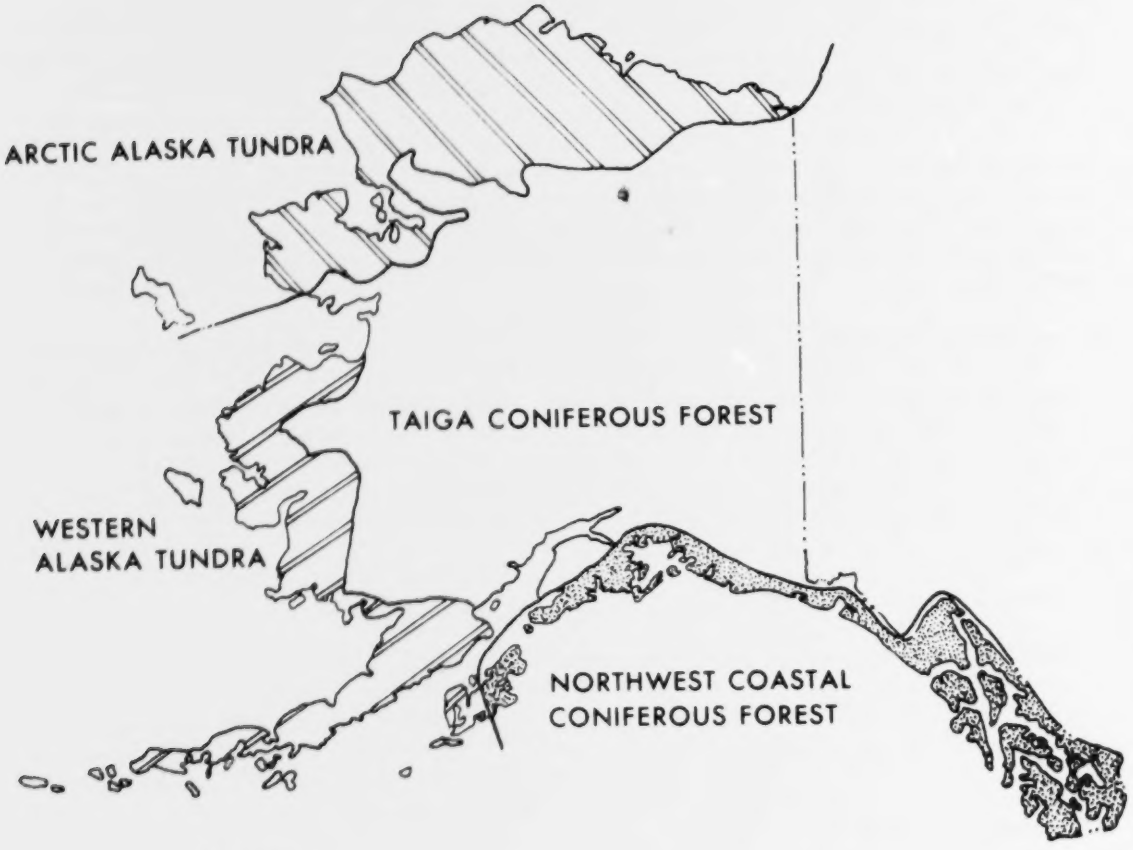
I GRASSLAND BIOME
1. Temperate Grassland
2. Palouse Prairie Grassland
3. California Prairie Grassland

II DESERT BIOME
1. Cold Desert
2. Hot Desert

III WOODLAND-BUSHLAND BIOME
1. Broad Sclerophyll
2. Oak Woodland-Bushland
3. Juniper Associates

IV CONIFEROUS BIOME
1. Northwest Coastal Forest
2. Montane Forest

MAP 2-5



LEGEND

MAJOR BIOMES IN ALASKA

CONIFEROUS FOREST BIOME

- Taiga Coniferous Forest
- Northwest Coastal Coniferous Forest

TUNDRA BIOME

- Arctic Alaska Tundra
- Western Alaska Tundra

Coastal, and the Montane Coniferous Forest of the coniferous forest biome will be discussed.

Impacts upon the five major biological communities or biomes are varied. Generally, the impacts on the vegetation from prospecting are usually slight to none. Offroad vehicle use during prospecting may result in significant but localized destruction of vegetation under certain soil, moisture and slope conditions. Impacts resulting from exploration activities usually range from moderate to severe, but would be localized. These impacts result from road building, drill pads, use of bulldozers, clearing survey lines, and movement of heavy offroad vehicles, especially when the soils are wet and the slopes are steep. Severe impacts result from mining operations on small areas such as roads, mill sites, tailings ponds, etc. Plant communities may be eliminated, changed or replaced as a result of unregulated mining operations.

-- Grassland Biome

Grasslands occur where precipitation is too low to support forest life forms but higher than that resulting in desert life forms. Soils are quite diverse, reflecting characteristics of the underlying parent material. Grassland soils contain large amounts of humus. Much of the grassland is used for agricultural cropland and domestic livestock grazing.

-- Desert Biome

Deserts and shrub-vegetated ecosystems generally occur in regions with less than 10 inches of annual precipitation and extremes in weather. The vegetation is adapted to aridity and bare earth is common; little humus is formed. Hot deserts generally are warm throughout the year and very hot in summer. The cold desert is very cold in winter. Most of the area remains essentially in its native vegetative state and is used primarily for livestock grazing.

-- Woodland-Bushland Biome

Woodland-bushland communities usually occur as biological islands at higher elevations in the desert and grassland biomes or in ecotones between the desert or grassland biomes and the coniferous forest biome. Vegetative cover ranges from shrub species typical of the cold desert to brush and small tree species in areas with greater precipitation. A diversity of plant species and climatic conditions exists among the subregions of the biome. Within this biome there are about 30,700,000 acres of public land of which 29,779,000 acres are considered useable by livestock.

--Coniferous Forest Biome

The coniferous forests contain a diversity of environments, species compositions, soils, resource products, and land uses. Precipitation in most of the biome is high, and the forests have a great capacity for

vegetative growth primarily valuable for wood and water production. Much of the land surface in the biome is federally owned--about 20,070,000 acres of public land.

-- Tundra Biome

Vegetation in the tundra biome is structurally simple and dominated by grasses, mosses and sedges of low stature (U.S. Tundra Biome Program of the U.S. International Biome Program and U.S. Arctic Research Program, 1971). Essentially an arctic grassland, the treeless tundra supports many lichens and mosses. Nearly all plants are perennial and annual production is low. Herbaceous and woody vegetation such as willow and birch is also present but is generally low or prostrate. However, 10 to 12 foot tall willows may form impenetrable thickets in gullies and other sheltered areas. In other places there may be much bare, stony soil with scarce amounts of plant life.

A thick, spongy mat of living and undecayed vegetation often saturated with water and interspersed with ponds characterizes the low tundra when not frozen. The high tundra on steep slopes may support only a sparse growth of lichens and grasses, with visibly barren areas. The vegetation of the tundra forms an insulating layer which is critical to the stability of the ecosystem. Removal or compaction of the vegetative structure can cause the permafrost to melt, leading to erosion and breakdown of the permafrost layer.

Animals

There is a wide variety of animals which includes terrestrial, aquatic, threatened and endangered wildlife species, domestic livestock (cattle, sheep, goats), and wild horses and burros. Like some species of wildlife, wild horses and burros are localized in distribution. The following is a general discussion of the animals which are most conspicuous in each of the five major vegetative biomes.

-- Grassland Biome

The grassland biome provides a food base for a large number and variety of animals. Many species are grazers, others are burrowers, and a large number of birds are ground nesters. Insect life is abundant, varied, and heavily utilized as food by many secondary consumers. All major animal phyla are represented in the biome. The most frequently observed terrestrial species include pronghorn antelope, mule and white-tailed deer, black-tailed and white-tailed jack rabbits, prairie dogs, ground squirrels, coyotes, badgers, ferrets, pocket gophers, desert cottontail, collared peccary. Other common species include prairie chickens, sage grouse, Swainson's hawks, rough-legged and ferruginous hawks, burrowing owls, groundnesting birds such as the meadowlark and horned lark, scaled quail, white-winged dove, scissor-tailed flycatcher, mocking bird,

various waterfowl, kingsnake, collared lizard, bullsnakes, and rattlesnakes.

Aquatic wildlife includes fish and various invertebrates confined to a water environment such as shellfish. Aquatic fauna in the grassland area are less diversified than in the more humid regions. The natural distribution of nonmigratory fish is confined to water bodies with accessible and suitable spawning areas. Anadromous or migratory fish species (e.g., salmon, steelhead) utilize the river systems which pass through the Palouse prairie and California prairie grasslands for spawning purposes.

Warm water fish species occur in larger streams and warm standing waters. Examples include the shovelnose and lake sturgeons, paddlefish, and gars of the Missouri River. Channel catfish inhabit small tributaries of the Missouri and some large reservoirs with warm, muddy waters. Bullheads adapt to a wide range of conditions, but prefer warm streams or ponds. The black bass, blue gill, and perch occupy a wide range in relatively cool streams, lakes and reservoirs. Cold water species in spring-fed streams of high elevation include various trout, mountain whitefish, grayling, suckers, and sculpins.

Several threatened or endangered species of wildlife are characteristic of the grassland biome. These include San Joaquin kit fox, black-footed ferret, American peregrine falcon, blunt-nosed leopard lizard, and masked bobwhite quail. Fish species currently identified include the Pecos gambusia and greenback cut-throat trout (U.S. Department of the Interior, 1974).

Due to better adaptation to grasslands, more domestic cattle are grazed than are sheep and goats. The wild horse and burro population is smaller than in the woodland-bushland biome.

-- Desert Biome

The desert biome is characterized by animals that have adapted to the desert environment in unique ways. These animals are characterized by mammals which are fleet of foot; mammals which move by jumping or with a ricocheting locomotion; mammals with a keen sense of hearing; burrowing vertebrates and various insects all having an extreme physiological adaptation to food scarcity and absence of free water (Allee, 1949). More than 750 species and subspecies of birds and mammals live in the desert. Mule deer, bighorn sheep, antelope, sage grouse, chukar partridge, and quail occur in suitable habitat of the desert. Many of the species may occupy the fringes of the desert, and then only seasonally.

Other common species include jack rabbit, desert coyote, kit fox, kangaroo rats, pocket mice, antelope ground squirrel, cave bat, big brown bat, leafnosed bat, lesser nighthawk, roadrunner, and Gambel quail, the

ringtail, spotted skunk, wood rat, peccary, Gila woodpecker, numerous small birds, bullsnake, three species of rattlesnake, and eight species of lizards.

Aquatic environments are limited. Desert aquatic environments have been altered by the construction of large reservoirs (Lakes Powell and Mead) and many small irrigation and stock watering reservoirs. Exotic species such as black bass, crappie, carp, sunfish, coho salmon, and striped bass have been introduced in some reservoirs. The Corvina, Sargo, and Bairdiella have been introduced in the Salton Sea. Most introductions have been successful while many endemic species have declined.

Many threatened or endangered species of wildlife live in the desert biome. The include, but are not limited to: Utah prairie dog, Sonoran pronghorn, masked bobwhite quail, Yuma clapper rail, southern bald eagle, American peregrine falcon, and Desert Slender Salamander (U.S. Department of the Interior, 1974). There are more threatened species of fish in the desert than in any other biome. This is due in part to the many isolated watersheds and the precarious nature of many water bodies. Typical species include: Devil's Hole pupfish, Owens River pupfish, Woundfin, Pahrump Killifish, Gila top-minnow, and Colorado squawfish.

-- Woodland-Bushland Biome

Woodland-Bushland biome is inhabited by mammals including the mountain lion, bobcat, coyote, gray fox, mule deer, white-tailed deer, ringtail peccary, wood rat, skunk, and brush rabbit. Other species having a more common occurrence in other woodland types include: pinon jay, western blue bird, rock wren, gray flycatcher, common crow, magpie, cliff chipmunk, pinon mouse, black-tailed jack rabbit, Nuttall's cottontail, golden eagle, redtailed hawk, scrub jay, mourning dove, scaled and Mearns quail, rattlesnakes, kingsnake, rubber boa, and sagebrush swift. Many small birds and lizards live in the community as well as amphibians including the tree frog and certain salamanders. (U.S. Department of the Interior, 1974; Bureau of Census, 1947, 1965, and 1970; Everhart and Seamon, 1971.)

Aquatic wildlife in the woodland-bushland biome are characterized by cold and warm water fish species. Varieties of aquatic environments exist in small, sometimes intermittent streams, upper reaches of larger rivers, impoundments, and some natural lakes. Waters are moderately rich in nutrients and micro-organisms; water quality may be fair to good. Some streams at times may carry heavy silt in brushland areas. The better quality and more stable waters are located in wooded areas. Fish inhabiting these waters include trout, whitefish, catfish, suckers, carp, squawfish, shiners, minnows, dace, chubs, sculpins, sunfish, perches, basses, and pikes.

Threatened or endangered species of wildlife recognized in the woodland-bushland biome include at least the California condor (California) and the peregrine falcon. Other threatened or endangered species ranging into this biome are Utah prairie dog, San Joaquin kit fox, blunt-nosed leopard lizard, Colorado squawfish, humpback chub, and woundfin (U.S. Department of the Interior, 1974).

Livestock use (primarily cattle and sheep use similar to that in the desert biome) occurs mostly in the spring and fall seasons. The range of wild horses is associated with the pinon-juniper type of the woodland-bushland biome. Burro populations occur in isolated numbers in remote sectors of the biome.

-- Coniferous Forest Biome

The coniferous forest biome extending from timberline to the ocean and from above the Arctic Circle nearly to the Mexican border, provides habitat for a wide variety of terrestrial animals. Some adaptable species found throughout the biome include mule deer, white-tailed deer, elk, moose, caribou, black bear, grizzly bear, wolf spp., coyote, fox spp., beaver, mountain lion, weasels, striped skunk, marten, mink, fishes, wolverine, and many species of squirrels, mice, shrews, etc., sharpshinned hawk, Cooper's hawk, great horned owl, saw whet owl, blue grouse ptarmigan, yellow-bellied sapsucker, hairy woodpecker, finches and sparrows, and many toads, frogs and garter snakes.

Wildlife typical of the biome are generally adapted to a closed canopy of coniferous trees interspersed with openings. Some species, particularly the herbivores, respond to the edge effect created by forest meadows, logging, or fires that favor development of an understory of nutritious vegetation. Other species, including the raptors and larger predators, may respond adversely to loss of the forest overstory. Most forest wildlife adapt to certain habitat changes, but extensive land management activities, especially when accompanied by vehicles and people, may be detrimental to many species. Varieties of wildlife such as fur bearers and birds which require a semiaquatic habitat usually increase when associated with streams, ponds, and lakes.

The waters in most of the streams and rivers in the montaine coniferous forest biome are usually of high quality and low temperatures. Aquatic ecosystems are diverse and complex. They usually contain a fair grade of aquatic food. High elevation streams support trout, whitefish, and sculpin. Lower streams support chub, carp, dace, suckers, and salmonids. Other common fish in the biome are black bass, sunfish, catfish, pike and minnows.

West Coast streams produce anadromous steelhead and five commercially important species of salmon: the chinook, sockeye, chum, pink, and coho. Migratory populations of coastal cutthroat trout are in many coastal

streams from California to Bristol Bay, Alaska. The anadromous fisheries are unique and directly dependent on the forest watershed.

Inland waters of the coniferous biome that do not empty directly into the sea are characterized by high quality, low temperatures, and a fair grade of aquatic food.

The Taiga (Alaska) Forest provides aquatic ecosystems characterized by high quality water of low temperatures in lakes, ponds, and marshes in various stages of natural succession. The larger river systems support commercially important runs of Pacific salmon, among them the Bristol Bay sockeye salmon fishery. Sockeye and chum salmon are the most numerous anadromous species. Typical residents are arctic grayling, whitefish, sheefish, and lake trout.

Endangered species include the Columbia whitetailed deer, American peregrine falcon, greenback cutthroat trout, Kendall Warm Springs, dace, Northern Rocky Mountain wolf, and the grizzly bear. Most domestic livestock in the coniferous forest graze on mountain meadows and open forest stands during late spring and early fall periods. Wild horses range into this biome with exception of the Taiga, remote areas of the Northwest Coastal Coniferous Forest, or some southfacing slopes.

-- Tundra Biome

Tundra biome known to have little vegetative cover with only scant growth of lichens and other low plants, is inhabited by many mammals and birds which remain throughout the year. These include the caribou, musk ox, arctic hare, arctic fox, lemming, and ptarmigan. Other characteristic mammals of the Arctic slope include the polar bear, arctic wolf, wolverine, Alaska red fox, marmot, Parry's ground squirrel, red-backed mouse, and several moles and shrews. The smaller mammals make their winter homes underneath the snow cover where temperatures are not so severe. The uplands are inhabited by caribou (except in winter), Dall sheep, barren ground grizzly bear, marmot, ground squirrel, rock ptarmigan, horned lark, and Lapland longspur.

Large numbers of many kinds of insects live in the low marshier elevations of the tundra. Mosquitoes, gnats, flies, beetles, bees, wasps, moth larvae, spiders, and mites may overwinter in plant tufts and under stones and driftwood. Aquatic insects and larvae either burrow into mud or pass the winter in the egg stage. Large numbers of birds (waterfowl and particularly numerous) migrate to the tundra to nest and rear their young during the brief summer; however, few birds remain in winter.

The lakes, ponds, and bogs of the tundra biome do not support large populations of aquatic life due to a lack of minerals and nutrients. Resident fish grow slowly but may grow to a large size when left

undisturbed. Characteristic fish are chars, grayling, and whitefish. The chars are lake trout (mackinaw) and arctic char. The arctic grayling is abundant and well distributed in tundra waters. Shellfish inhabit the major rivers. The chum and pink salmon fry migrate from streams to lakes and spend one or two years in the lakes before they migrate to the sea.

Endangered species include the Arctic peregrine falcon which breeds above the Arctic Circle, the American peregrine falcon, and the Aleutian Canada goose which nests on some of the islands in the Aleutian Islands chain. The musk ox, once extinct in Alaska, has been reintroduced. It is uncertain whether the species will be re-established. The only domestic livestock in the Alaska tundra are native owned reindeer.

Impacts (depending upon a particular species) on the wildlife resource resulting from mineral prospecting and exploration activities are varied and range from slight to severe. Impacts resulting from prospecting are usually slight to moderate, depending on the area in which the activity occurs and the species involved. The extent of the impact depends on the animal. For example coyotes are very tolerant, while brown bear are much less tolerant. In important wildlife areas, the disturbance to wildlife from noise and human presence can be significant as a result of prospecting activities. For example, breeding or calving or similar activities may be inhibited. It has also been found that while people conduct activities like prospecting, there is an increase in wildlife disturbances and losses through poaching, noise, etc. Moderate to severe impacts usually result from exploration activities within a relatively small area. These impacts result from noise and the presence of humans during exploration work. There are also additional disturbances and wildlife losses from poaching, road kills, etc.

The impacts upon wildlife from mining operations may be severe depending on the animal, but are normally limited to small areas and/or the adjacent areas. There is loss of habitat on road construction areas, mill sites, tailings ponds, etc., which may result in displacement of animals inhabiting these sites. Note, however, that some of the more tolerant animals, such as wolves or coyotes, are minimally affected by the sites. In addition, there is a displacement of animals along the access routes, around the mills, tailings ponds, and other places where human activity is concentrated. Mining operations may inhibit wildlife use of an area due to excessive noise, vehicle movement on roads, and direct habitat alteration through physical disturbance. Operations may also change behavioral patterns.

Road construction with excessive back slopes may deter movement in mountainous terrain or may trap snowcasing drifts which are a barrier to free movement during critical winter periods. The use of roads by those conducting mining operations may, through noise, dust, and human presence, have disruptive effects on wildlife movement and use of habitat as far as one-half mile either side of the road. This is not solely the

effect of mining operators using the road, but includes secondary uses by hunters, sightseers and other recreation or administrative traffic, which may exceed mining traffic.

Additional adverse impacts (refer to Water Resources and Soil Sections, Chapter 2) include improper placement of waste dumps, roads or other structures, toxic materials entering streams under current operations conducted without benefit of surface management. The most critical losses in portions of streams or other aquatic habitat productivity occur in the invertebrate populations which are the principal component of the food chain.

Human Values

-- Cultural Resources

Cultural resources consist of those fragile and nonrenewable remains of human activity, occupation, or endeavor, reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, and important natural features. These resources include (1) physical remains, (2) areas where significant human events took place, even though evidence of the event no longer remains, and (3) the environment immediately surrounding the actual resource. Cultural resources and prehistoric and historic remains represent a part of the continuum of events from the earliest evidences of man to the present day. Socio-cultural resources are those places, objects, structures, and things important to a subgroup or to the population at large. Included are values that reflect the concepts, religion, social heritage, habits, skills, arts, and lifestyles of a given people. The laws, executive order, regulations, solicitor's opinions, and Bureau policies direct that cultural resources shall be considered prior to any Federally initiated or approved action which may affect them.

Cultural resources may be impacted by earth surface disturbing actions related to prospecting for minerals. The use of geological, geophysical, or geochemical methods of prospecting should not create impacts upon cultural resources except for occasions when the use of explosives or motor vehicles disturb the earth's surface. Tires and tracked vehicles may damage cultural resources through displacement or breakage of artifacts, creation of erosive conditions, and disturbance of the integrity of sites or districts.

Presently, prospecting is not limited to such essentially remote sensing measures as geochemical, geophysical, or geological techniques. Damage to cultural resources may occur from surface disturbance caused by earthmoving equipment such as bulldozers and backhoes and through use of hand tools. This disturbance may occur through stripping activities meant to reveal subsurface minerals or rock formations. It may also occur when roads, trails, and other access routes are developed, maintained or improved to assist prospecting activities.

Cultural resources may be affected by exploration activities which disturb the earth's surface. The number and concentration of personnel needed for exploring a mineral prospect increase the possibility that cultural resources may be adversely impacted. The archeological and historic resources in the vicinity of the worksite and along the routes to the exploration site will be more accessible. The cultural values then become susceptible to damage through curiosity in ways detailed in the section on impacts generated by prospecting. The number of areas which might be impacted through activities and persons related to exploration will be fewer compared to those potentially impacted by mineral prospecting actions. Where they do occur, the impacts will be of greater intensity and longer duration because of the greater number of persons involved and the longer period of time the personnel and activities will be active there.

Where the impacts occur as a result of personnel curiosity, the damage may be either partial or total. Assessments of partial damage may be misleading since no one can know all the scientific or historic values which have been damaged or stolen. Integrity of existing cultural resources may be destroyed whether damage to them is partial or total. Types of cultural resources damaged and degree of damage to these resources have been described in the section dealing with impacts of prospecting activities. They are similar for exploration impacts though they will be greater in duration and intensity.

Losses would be caused by development actions performed to extract and process minerals. Construction of buildings, roads, mine mouth facilities, pipeline, electric transmission lines, and ancillary facilities may destroy cultural resources which exist on or near the construction sites. Vandalism, theft, physical damage, loss of the property's integrity through isolation or alteration of its surrounding environment, and introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting, adversely affects the scientific, historic or heritage value of any cultural resource located on or near the site of a mining operation. The easier access to cultural resources in the vicinity of or en route to the mining operation may contribute to their further destruction through increased traffic. There is no prohibition in §106 of the National Historic Preservation Act of 1966 approval of plans of operations which would result in destruction of historic register sites. 36 CFR part 800 requires consultation with the Advisory Council on Historic Preservation which may lead to agreement that no mitigation is possible. The Archeological Resources Protection Act of 1979 (16 U.S.C. §470 aa *et seq.*) specifically provides that it does not repeal, modify or impose additional restrictions on mining activities. Thus, as part of the Secretary's authority to prevent unnecessary or undue degradation, he may require the completion of archeological excavations but this would not be a substantive basis for denial of approval of a plan of operations. The Antiquities Act of 1906 (16 U.S.C. §431 *et seq.*) authorizes the withdrawal of lands owned by the United States for historic landmarks etc., from operation of the mining laws.

-- Recreation Resources

The major categories of recreation uses of public lands are hunting, fishing, winter sports, water sports, collecting rocks and minerals, general leisure use, specialized activities such as offroad vehicles, and sightseeing. Recreation resources near urban areas, such as the California Desert, may be subject to high density use in the immediate vicinity of attractions, e.g., sand dunes areas, while nearby lands are virtually unused.

Activity under the Mining Act of 1872 has benefitted certain recreation activities, such as rock and mineral collection, sightseeing, and offroad vehicle use. Some mining operations may conflict with recreation use.

Many of the ghost towns of the west are there because of the 1872 Mining Law. Much printed publicity has been given those cultural/scenic curiosities resulting in thousands of visitors yearly to these historic mining areas.

Game populations may be displaced by the presence of man. Animals may be killed through poaching or as road mortalities or their habitat may be preempted for human use. Recreational hunting and wild animals sightseeing may be reduced by mining operations.

Water resources used for recreation may be contaminated by mining operations. This contamination is in the form of bacteria from human wastes, unnaturally occurring chemicals used in mining operations, and siltation caused by the mining operations themselves and their attendant developments, such as roads, transmission lines, and vegetation removal.

-- Visual Resources

Visual resources on Bureau administered lands are impacted by mining operations which remove existing vegetation or disturb the earth's surface. Because of less vegetation on the western lands' surface, the marks left by development are more visible and long lasting due to slow revegetation. At present, prospecting, exploration, and mining cause surface disturbance through search of valuable minerals, create intrusions with mine shafts and headframes, and mar the texture and line of a previously natural environment with dumps and spoils piles. In addition, some roads constructed for mining operations scar hillsides and interrupt landscapes with unnatural lines and colors.

Visual resources or landscape features are varied. The eastern parts of North Dakota, South Dakota, and Nebraska are relatively flat, with little to break the line of the natural horizon. Westward from this level region the land rises to the broken and drier high plains.

The forested Rocky Mountain States are distinguished by their sharp broken features and seasonal snow caps. They are cut by many deep canyons with rivers flowing east and west to both oceans. The tree-covered mountain tops yield to the more sober shades of the Basin-Range deserts. The landscapes of the Basin-Range deserts are highlighted by abrupt changes of topography, and the northsouth trending upthrusts which break the texture of broad, flat expanses into short, abrupt ascents and descents.

To the west is the extensively forested High Sierra region. High mountain lakes and snow capped peaks dot the region as a result of glacial sculpting changing the form of the uplifted mass. Elevation then drops to a series of northsouth valleys before rising to coastal mountain ranges which descend to the Pacific Ocean.

Despite manmade roads and highways, electrical transmission lines, pipeline rights-of-way, railroads (even cities and human-associated developments which have been underway for 100 or more years) the public lands and Federal mineral estate are largely open and relatively unmarked by man. On a national scale of comparison, these lands show relatively little developmental disturbance and few marks of human use and occupation.

In Alaska, the scale of the landscape and the natural environment appears much larger than in the continental United States. Large mountain ranges, such as the Wrangells in the southeast, the Brooks Range in the north, and Mount McKinley, the highest mountain in North America, are contrasted with intervening broad, level river valleys and long, large undammed rivers. Extensive horizon-to-horizon forests characterize Alaska's mountains of the south coast which meets the sea in long, steep-sided fjords. Alaska's scenic quality is the most unspoiled of any region of the United States, thus, conflicts with activities under the Mining Law of 1872 are a continuing concern.

-- Wilderness

Wilderness, as defined in the Wilderness Act, is in part an area where the earth and its community of life are untrammeled by man, and an area of undeveloped Federal land retaining its primeval character and influence. An absence of permanent human use and occupation is an important guiding principle for defining a wilderness. It generally appears to be more affected by forces of nature with marks of man's work substantially unnoticeable and has outstanding opportunities for primitive, unconfined recreation or solitude.

Section 603(a) of FLPMA requires in part:

"Within fifteen years after the date of approval of this Act, the Secretary shall review those roadless areas ... having wilderness characteristics and shall from time to time report to the President his recommendation as to the suitability or nonsuitability of each such area or island for preservation as wilderness ..."

This required wilderness review (including Alaska) must be completed by October 21, 1991, and has been initiated. Basically, the BLM's review process will consist of the following steps:

a. Inventory--The inventory phase involves determination and location of areas containing wilderness resources that meet the criteria established by Congress. Such areas are identified as Wilderness Study Areas (WSA's). The BLM has initiated a concerted effort to inventory all eligible public lands for basic wilderness characteristics. These inventories will help determine which land will be dropped from further wilderness review and which ones will be designated as WSA's for further assessment. Table 2-4 presents the nearly completed results of BLM's Wilderness Inventory. Final identification of WSA's in the contiguous western States is scheduled to be completed by November 1980.

b. Study--The study phase involves the process of determining which Wilderness Study Areas will be recommended as suitable for wilderness designation and which will be recommended as nonsuitable. These determinations, made through the BLM's land use planning system, consider all mineral and non-mineral resource values, and uses of public lands.

c. Reporting--The reporting phase consists of actually forwarding or reporting recommendations through the Secretary of the Interior and the President to Congress. The Secretary's recommendations must be reported to the President no later than October 21, 1991, and the President's recommendations must be reported to the Congress no later than October 21, 1993.

Not all Bureau administered lands will be included in the wilderness review. Pertinent lands excepted from wilderness review include:

-- Lands where Federal Government owns mineral rights but not surface rights.

-- Lands tentatively approved for State selection in Alaska.

-- Areas on the revested Oregon and California (O&C) Grant Lands which are managed for commercial timber production.

Until Congress acts on the President's recommendations regarding the wilderness suitability of study areas, section 603(c) tells BLM how to manage the lands that are being reviewed, in these words:

TABLE 2-4 STATISTICAL SUMMARY
BLM Wilderness Inventory Results (Shown in Acres) as of May 30, 1980

1. Contiguous Western States

State	Public lands subject to wilderness inventory	Proposed Intensive Inventory Decisions			Inventory Completed Final Decisions Announced	
		Not yet announced	Announced Subject to Public Review			
			Lacking wilderness characteristics	With wilderness characteristics	Lacking wilderness characteristics	Wilderness study areas
AZ	12,596,000	0	2,705,000	2,164,000	7,210,000	517,000
CA	16,585,000	0	120,000	9,000	10,118,000	6,338,000
CO	7,996,000	0	491,000	765,000	6,690,000	50,000
ID	11,949,000	252,000	1,090,000	804,000	8,983,000	820,000
MT	8,140,000	0	1,357,000	475,000	6,000,000	308,000
NV	49,118,000	17,000	11,319,000	3,079,000	33,077,000	1,626,000
NM	12,847,000	0	1,327,000	886,000	10,486,000	148,000
ND	68,000	0	0	0	68,000	0
OK	7,000	0	0	0	7,000	0
OR	13,965,000*	0	4,192,000	1,750,000	7,584,000	439,000
SD	277,000	0	5,000	0	272,000	0
UT	22,076,000	0	3,190,000	1,752,000	16,707,000	427,000
WA	310,000	0	14,000	15	296,000	0
WY	17,793,000	0	562,000	497,000	16,678,000	56,000
Totals	173,727,000	269,000	26,372,000	12,181,000	124,176,000	10,729,000

2. Eastern States

State	Public lands subject to wilderness inventory	Proposed Intensive Inventory Decisions			Inventory Completed Final Decisions Announced	
		Not yet announced	Announced Subject to Public Review			
			Lacking wilderness characteristics	With wilderness characteristics	Lacking wilderness characteristics	Wilderness study areas
MN	45,000**	0	701	0	44,299	0

*Does not include 1,759,200 acres of Oregon and California Grant lands which are exempt from wilderness review.
**Includes an estimated 2,000 acres of unsurveyed islands.

"During the period of review of such areas and until Congress has determined otherwise, the Secretary shall continue to manage such lands according to his authority under this Act and other applicable law in a manner so as not to impair the suitability of such areas for preservation as wilderness..."

A clause in Section 603(c) lays out exceptions for existing mining, grazing, and mineral leasing (what will be called "grandfathered" uses) in these words:

"...subject, however, to the continuation of existing mining and grazing uses and mineral leasing in the manner and degree in which the same was being conducted on the date of approval of this Act...."

However, these uses are not completely unrestricted. The Secretary is also directed by Section 603(c) to "take any action required to prevent unnecessary or undue degradation of the lands and their resources or to afford environmental protection." This applies not only to these grandfathered uses, but to all activities. Section 603(c) also allows appropriation under the mining laws to continue.

These mandates establish as a matter of policy that, while some development activities may continue or be permitted in a WSA, they must be carefully regulated. Most activities, must be regulated to prevent impairment of wilderness suitability, and in some circumstances development may be prohibited where impairment cannot be prevented or where the effects cannot be easily eliminated. Operations that qualify for valid existing rights or grandfathered rights are exempt from the non-impairment criteria.

During exploration activities, surface disturbance, noise, and human habitation will be factors which affect the primeval character of an area. Though fewer in number, the relatively greater intensity of exploration activities tends to reduce the opportunities for solitude and unconfined type of recreation. This occurs through irreversible land modifications such as roads, excavation, and hydrological and vegetational changes where the state of naturalness often cannot be successfully reclaimed. Abandoned structures and machinery, plus other refuse may diminish wilderness characteristics of an area. Existing colored spoils, waste rock constituents, and unnatural land surface disturbances may negatively affect an area's potential for Wilderness designation.

The degree of development usually required by an operating mine may be sufficiently high to detract from wilderness values of lands within sight or audible range of the mine and its appurtenances. Developments not on the mine site itself may also affect the wilderness character of an area. These include all roads, pipelines, transmission lines, railbeds, firebreaks, communication sites, airfields, buildings and other structures, and all evidences of man's presence, such as trash, litter, and other solid wastes.

-- Paleontological Resources

Paleontological resources are fossilized remains of prehistoric plants and animals through which man studies relationships between modern plants and animals, in addition to the chronology of the earth's history. They exist in sedimentary formations throughout the western region. Paleontological remains range in size from the giant bison and mammoth which lived 10,000 years ago, to the unicellular micro-organisms which existed 2.8 billion years ago. Paleontological values discovered on public lands include the dinosaur remains of Utah, Colorado, Wyoming, and Montana; fossil fish deposits of the Green River Formation; and insect and plant fossils ranging in size from large petrified trees to fungal deposits.

Certain Bureau lands are the only known location of some paleontological specimens. Shale, sandstone and limestone outcrops, fault scarps, and eroded lands including badlands are areas of high potential for finding paleontological resources.

Surface disturbance from mining operations in sedimentary rocks may pose a threat of destruction to significant paleontological resources. Underground mines are less of a threat because they disturb less overburden. In all but the most rare occasions, fossils are found in sedimentary rocks. These rocks may also contain valuable minerals such as bentonite, silver, lead, zinc, and copper. In almost all cases, significant paleontological specimens can be removed with relatively little expense and minimal or no interference with the mining operation.

The impacts to paleontological resources will be similar to those to cultural resources with some small exceptions. Site integrity will not be as critical a factor for the scientific value with paleontological resources as with cultural resources.

Some impacts will be more serious to paleontological resources than to cultural values due to their generally more covert locations. Archeological and historical values usually exist on the surface or rarely at significant depth, whereas paleontological resources may be found at almost any depth. For this reason, many buried paleontological values remain undiscovered unless they are unearthed by construction or mining operations.

Adverse indirect impacts of mining operations also generally include the unauthorized removal of paleontologic resources, the destruction of paleontologic resources by all types of offroad vehicles, and other activities. Such destruction is accelerated by increases in population, as well as development or improvement of roads or trails associated with mining operations. Man-caused changes to the earth's surface can also have indirect impacts through erosion and weathering.

SOCIOECONOMIC

See the previous discussion on mining industry for the summary presentation of social and economic relationships with current mining situation.

CHAPTER 3

ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

INTRODUCTION

This section identifies the general impacts (see Table 3-1) of the proposed action on all three levels of mining operations--prospecting, exploration, and mining. Chapter 3 also discusses the effectiveness of the proposed action in terms of the impacts to the mining industry, resource values, and the administration of the proposed regulations. Impacts discussed in Chapter 3 should not be confused with the present situation and ongoing effects discussed in Chapter 2.

The proposed regulations impose some protective requirements regarding destruction or cutting of trees and unauthorized use of tracked vehicles and earthmoving equipment. They do not provide for or assign specific responsibility for enforcement of existing protective legislation. As a result, compliance with these proposed regulations may not satisfy other laws and regulations which might affect mining operations.

Although impacts of the proposed regulations on mining activities vary from site to site, some rough generalizations can be made about the levels of mining activities under the proposed regulations 43 CFR 3809. (See Table 3-1.)

The available data for this EIS are general and not site-specific, due to several factors such as the number of operations affected or variables in types of mining operations. Therefore, the impact analysis is presented in broad terms. The net effect of these regulations would be beneficial impacts to the environment resulting from regulation of mineral activities; however, the regulations may have an adverse effect on domestic mineral production. These beneficial impacts are realized through the reclamation of disturbed sites, particularly in the areas of recreation, wilderness, scenic, cultural, water, wildlife and vegetation resources.

Net effects in the areas of endangered species, wetlands, air quality, water quality, and solid wastes are uncertain as these are already under a measure of Federal and/or State control. These regulations will provide in advance of operations, through requirement of an acceptable plan of operations which includes reclamation measures, increased protection for the renewable and nonrenewable resources by preventing unnecessary or undue degradation of the public lands or impairment of lands under wilderness review.

MINERALS INDUSTRY

The following discussion is limited to socioeconomic impacts of the proposed action on the mining industry.

TABLE 3-1

IMPACT TABULATION OF PROPOSED REGULATIONS

	Activity/ Area Involved	Potential Area	Existing Controls 1/	Current Impact	Change Caused by Proposed Regulations	Residual Impacts
PRE-MINING	Road construction	All active and some new claims, short and usually light duty	ROW regulations where appropriate	Local dust and erosion; increases access to remote areas, local vegetation and soil disturbances; visual disruption	POO required by 3809.1-1 (b) Reclamation required on abandonment.	Lessened but not eliminated on pub-lands. Reduced significantly on WSAs.
	Driving over area	APL[2]--usually confined to existing roads or trails but some off road travel with 4WD	ORV Regs	Temporary local disturbance of vegetation. Short or long term soil displacement	No change	Same as above
	Site clearing	All active claims limited to small areas of intensive prospecting	Varied	Similar to road construction	POO required by 3809.1-1 Reclamation required	Same as above
	Drilling testholes	All active claims 1 or more holes per claim	Varied	Temporary local noise, dust, vegetation disturbance and soil erosion	3809.1-1 requires POO if surface disturbance occurs.	Same as above
	Excavation-Pits/trenches	All active claims, small shallow workings/claim or group	Varied	Local, temporary, dust, noise, vegetation disturbance, visual, and animals. Long-term would include visual, land use conflicts and wildlife	POO required 3809.1-1	Same as above
MINING	Installation of structures and attendant facilities	Active claims, life of mining venture	Varied	Temporary--dust, noise Short term	POO required by 3809.1-1 Reclamation required.	Same as above
POST MINING	Removal of structures	All abandoned mines	None	Temporary--dust, noise, Long term--visual, vegetation, water quality hazards to humans and wildlife access	Removal under a POO	Long term--visual scars, vegetation
	Sealing workings	Same	Varying State laws	Long term--water quality, hazard to humans and animal wildlife	Sealing in all areas under POO	None anticipated

1/ See Table 1-2 for State Requirements. There are also other Federal laws such as the Antiquities Act, Clean Air Act as amended 1977, Federal Land Management and Policy Act, Water Pollution Control Act and Regulations such as ORV which presently provide some measure of protection.

2/ APL=All Public Lands

Mineral production from public lands may be hindered by implementation of the regulations due to the increased costs of developing mineral deposits and possible time delays in plan approval. The major impacts expected at the individual operator level are costs of plan preparation, compliance with operating conditions, reclamation, bonding, and possible delays and restrictions after activities have commenced. The costs of reclamation and bonding represent major limiting factors which some operators may not be able to absorb.

Indirect effects of the proposed regulations on the local and national scale will result from the cessation of some operations, and the increased costs and impacts placed on future operations and mineral activity. Operators who may be unable to meet additional costs or requirements of the proposed rulemaking must either restrict the scope of their activities to areas not covered by these regulations or cease to operate completely. The effects of mineral activity shutdown on the general public and economy may include the following:

- delay in new mineral discoveries from reduced exploration activity;
- localized loss of employment and revenue;
- foregone development of marginal mineral deposits frequently explored and developed by small operators; and
- reduction of domestic mineral production, thereby increasing United States dependency on foreign imports.

For those operators who are able to operate under the additional costs and constraints of the proposed regulations, the following impacts may occur:

- increased costs of minerals transferred to the general public in the form of higher prices for goods manufactured from mineral products;
- lower profit margins for companies who cannot recover increased costs due to international markets;
- reduction in exploration activity resulting from decreased profits and additional costs;
- foregone development of marginal deposits that are no longer economical to mine; and
- potential delays in approving plans of operations which may create uncertainties in contracting, employment and investments.

It is difficult to project the number of activities that may be curtailed by the proposed rules. However, the discretion afforded the authorized officer and the requirement that the operator's financial posture be considered in reviewing plans of operations should prevent unnecessary cessation of mining activities. Today, many extraction operations are occurring on private lands acquired via the Mining Laws. These operations would not be affected by the proposed regulations. However, it should be noted that future mineral patenting, especially in lands being reviewed for preservation as wilderness, could be hampered by access, assessment work, and exploration limitations which may inhibit the claimant's ability to prove a discovery. Likewise, increased operations costs necessary to avoid unnecessary or undue degradation may cause a marginal prospect to be uneconomical and thus fail to satisfy the prudent man/marketability standard of validity. In States where mining and reclamation laws presently regulate minerals activities, the impacts of the proposed regulations on a mining activity may be negligible. Federal and state requirements would be coordinated to avoid duplication and conflicting requirements.

There are potential beneficial impacts which should result from the proposed action. Widespread protection and reclamation requirements may eventually lead to the discoveries of new and improved methods or technologies for restoring damaged lands. In addition, closer coordination and personal contact between BLM officials and the minerals industry may promote a better understanding of each party's concerns and problems.

NATURAL ENVIRONMENT

Air Quality

The overall impacts of the proposed regulations will benefit air quality. Mitigating measures, such as requirements for dust control measures, prescribed by the authorized officer will reduce the adverse impacts of mining activities on air quality. Where operations are allowed to proceed under an unapproved plan, mining activities may have negative impacts on air quality; however, existing Federal and some State laws regulate mining and other activities causing air pollution on private and public lands.

Water Resources

The proposed regulations as they apply to prospecting activities are expected to have little impact on water resource. Prospecting activities are quite dispersed, having minimal impacts affecting water quantity and quality, except for small rivers and streams prospected for placer minerals. Most states have laws controlling such activities which are applicable to public lands.

In some phases of mining and exploration, present ongoing impacts may be minimized through operation plan stipulations. Beneficial impacts could result from requirements (stipulations) in the plan of operations to:

- plug all drill holes and plug between aquifers preventing interchange between aquifers or release of flow from artesian aquifers;
- construct drill mud pits so that surface runoff would not enter and cause spillage or rupture; and
- construct roads and other facilities to minimize concentration of runoff and its associated erosion.

Mining operations often produce a considerable amount of barren or low-grade material as waste which is deposited on the land surface. Proper location, design, and operation of disposal systems minimize some of the problems of groundwater contamination. (Refer to EPA guidelines for Solid Waste Management discussed in Chapter 1.) Restrictions on an operator regarding runoff (reduction of sediment, salt pickup and discharges), protection of groundwater, etc., will reduce adverse impacts on water. The proposal will provide some protection in prospecting and exploration activities where none now exists and provide for mitigation of impacts through plans of operations.

Soils

Keeping in mind that successful reclamation depends on geographic location and climatic conditions, the proposed regulations should reduce soil loss and deterioration throughout all levels of mining operations. Implementation of plans of operations will aid in reclamation of mined surfaces. The requirement of plans is particularly effective since preplanning generally ensures the success of reclamation. For example, segregation of overburden and returning topsoil to the surface facilitates revegetation. In cases where operations proceed under an unapproved plan, there may be negative impacts due to loss of topsoil; however, many State laws require segregation of topsoil from non-productive overburden. Where vegetation is non-existent, or revegetation impossible, the proposed regulations should help to minimize erosion and damage to land contour through required regrading. Replacement of overburden in excavated areas may reduce associated safety hazards. The net effect of the proposal is expected to be positive for soil conditions.

Vegetation

Implementation of the proposal would have a beneficial effect on vegetation and mitigate much of the damage resulting from existing mining operations. When conditions require a plan of operations, proposed stipulations will be enforced to reduce vegetative disturbances. Whether for prospecting, exploration, development, mining or processing ores, these regulations will restrict unnecessary disturbance associated with road construction, land clearing, offroad vehicle use, removal of trees and other activities which may harm the vegetation. In addition, the proposed rules also provide for reclamation and revegetation of a disturbed surface which will greatly reduce the long-range impacts of mining operations. Revegetation may increase productivity of lands.

Although the proposed regulations do not specifically consider unique botanical communities or areas, minimizing impacts on such areas falls within the intent of the regulations. Provisions are made for protecting such plants and areas when recommending stipulations for all plans of operations. Plans involving areas which contain threatened or endangered plant species will either be revised to protect them or if protection is impossible, the plan may be rejected.

Animals

These proposed rules provide procedures whereby roads will be constructed only when existing roads are not adequate. Stipulations included in plans of operations will minimize physical impacts of roads on wildlife habitat and govern the use of roads following construction to minimize disruption of diurnal or seasonal behavior patterns such as nesting, calving, fawning, breeding, and migration. Required

revegetation of disturbed areas may provide improved forage and cover for many wildlife species.

Many animals such as rodents (e.g. pack rats and marmots) adapt to mining operations. In addition, abandoned structures often become haunts for barn swallows, owls, bats, and other species. These animals could be adversely affected by removing these structures through reclamation. A wide array of game and non-game species benefit where surface mining and reclamation breaks up areas of homogenous vegetation creating more habitat diversity and edge. Many unreclaimed pits have become water sources for domestic and wild animals. Refilling of these structures could have an adverse impact. Where state regulations do not apply, dredge mining operations conducted without the benefit of the proposed rules have in the past caused severe damage to aquatic environments. Use of mechanical earthmoving equipment in streambeds and along streambanks, or excessive disturbance of watersheds, have caused sedimentation of fish spawning gravels, high water turbidity, and alteration of stream channels resulting in extreme loss of aquatic productivity. The proposed regulations should have a beneficial impact on animals in that surface disturbance and habitat disruption will be minimized.

Human Values

CULTURAL AND PALEONTOLOGICAL RESOURCES

The proposed rulemaking will mitigate adverse impacts on cultural and paleontological resources where possible. Where a plan of operations is required, the operator is obliged to pay for mitigating measures, such as salvage costs, for the protection of those resources discovered prior to plan approval. Sec. 106 of the National Historic Preservation Act does not strictly prohibit activities impacting cultural or paleontological resources, and the authorized officer, after weighing the significance of the resource with respect to the economics of salvage or mitigation, may decide that operations will continue despite damage or destruction. If cultural or paleontological resources are discovered after plan approval, it becomes the finanical obligation of the United States to mitigate adverse impacts (including salvage).

Where mining operations do not require a plan of operations, impacts to these resources may not be mitigated unless the operator is able to recognize these values and mitigate them through avoidance. If implementation of the proposed regulations inhibits mining, the discovery of cultural and paleontological resources may be adversely affected as mining activities may lead to their discovery.

VISUAL RESOURCES

Visual Resource impacts resulting from mining operations may not be fully mitigated by the proposed action. The proposed regulations may partially mitigate abuses by requiring an approved plan of operations for

certain construction and maintenance activities, operations which are destructive to trees, and the use of tracked vehicles and earthmoving equipment. Damage to scenic quality in certain arid areas can occur through use of non-earthmoving rubber-tired vehicles during prospecting and exploration activities. These activities are not covered by the proposed action; however, the proposed action will protect visual qualities by limiting unnecessary construction which results in the destruction of vegetation including trees and disturbance of soil and other material. Restoration of the area after mineral extraction activities have been completed would also be required which will have a beneficial impact on visual resources.

--Wilderness Resource

Wilderness Resource protection requirements of Section 603(c) of FLPMA can be met in part through implementation of the 43 CFR 3802 regulations. In essence the regulations provide a means to ensure that mining operation impacts are consistent with management requirements of Section 603(c).

SOCIOECONOMIC

The scope of the proposed action regarding socioeconomic aspects is primarily limited to the mineral industry. This impact analysis is contained in the section entitled "The Minerals Industry."

It is estimated that approximately 62% of the total 1.2 million claims filed as of May 30, 1980 are located on lands administered by the BLM. The number of claims involved in each operation will determine the number of plans submitted. If the number submitted in the first year of implementation approaches BLM State Office predictions of 5,700 plans, workloads will exceed programmed budget and manpower capabilities. A less than full level of effort on all plans will result in many operations being allowed to commence or continue under an unapproved plan subject to later review. As a result of increased workload, without additional funding and manpower, management of other mineral activities could be diverted.

Since an operator may incur additional costs in order to fulfill certain requirements, the Bureau may encounter a new form of illegal entry or trespass--that of exploration and mining without a required plan of operations. These actions may also result in new forms of court litigation or bond forfeiture resulting from the failure of individual operators to reclaim a mined area according to the steps and standards as set forth in the plan of operation.

CHAPTER 4

MITIGATING MEASURES NOT INCLUDED IN THE PROPOSED ACTION

Implementation of the proposed regulations is an attempt to mitigate environmental impacts with the projected result of positive rather than adverse effects.

The environmental impacts resulting from mining operations will vary depending upon the operation (type, level, location, etc.) and the particular site characteristics such as soil, vegetation, slope, and aspect. Therefore, the mitigating measures will vary accordingly. The proposed regulations are themselves a mitigating action designed to prevent unnecessary or undue degradation of public lands and to prevent impairment of lands under consideration for inclusion in the Wilderness Preservation System. While the proposed final rulemaking does this, the wide range of mineral activity settings likely to occur will require the incorporation of reclamation measures unique to each situation. BLM will work with the operator on a site-by-site basis to insure that plans of operations, where required, and reclamation of the disturbed areas are both reasonable and necessary. In this way the impacts to the mining industry discussed in Chapter 3 can be mitigated through reasonable and cooperative administration of the regulations; however, the net result of imposing new requirements on the industry, which may cause added costs and possible work delays, will remain.

CHAPTER 5

ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED

Any authorized use results in land disturbance and conflicts with other land uses, as well as impacts on air, water, and visual resources through increased dust, noise, and human or animal activity. Even well regulated, carefully conducted mining activities will result in some degree of conflicts and unavoidable adverse impacts to resources other than mineral, such as rangeland, recreation, wildlife, etc.

The proposed action, 43 CFR 3809 regulations, may result in the loss of certain available mineral deposits due to increased costs or conflicts (threatened and endangered species). The extent of the loss is expected to be minor; however, magnitude of loss may increase depending on circumstances discussed in Minerals Industry (Chapter 3). Neither the mineral commodities which would be involved, nor the extent of lost future productivity can be predicted.

Local impacts from mining operations which do not fall under the proposed regulation will continue to occur. These would result from levels of prospecting which do not require a plan of operation. The degree of impact from those activities is judged to be minor.

Overall, the proposed action should have no net adverse impacts on the components of the natural environment.

CHAPTER 6

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Mining is a relatively short-term use of a localized area since minerals occur in finite amounts at specific locations. Once mined, they may be used or recycled with no additional disturbance to the mined area. The area itself ceases to be the source of the particular minerals extracted.

The proposed regulations are not intended to eliminate all impacts. Therefore, enforcement of these regulations will not entirely eliminate the short or long-term impacts of mineral related operations. For example, in some areas when the surface material is removed in an operation, production of timber and forage may be reduced or eliminated. Surface drainage, water quality, aesthetics, and wildlife habitat, may also be affected. However, in other regions where conflicting resource values may be limited or non-existent, mining might represent the best use of the land. In these areas the potential for lost non-mineral resource productivity is minimal.

If the proposed regulations are implemented, unnecessary adverse surface impacts will be prevented. Upon termination of the mining operation, the area would be reclaimed as necessary to ensure other resource productivity. The long and short-term effects of these regulations will be a reduction of environmental degradation due to mining operations. Therefore, the short-term commitment of resources will be reduced and long-term productivity increased. At the same time, the long-term cost of other resources lost to the public will be reduced by the proposed rules.

CHAPTER 7

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The use of finite resources in a manner which precludes their use for other purposes is termed an irreversible and irretrievable commitment of resources. Except in the case of certain re-cyclable and reuseable minerals, mining involves an irreversible commitment of the mineral resources. Additionally, mining activities may involve an irretrievable commitment of non-mineral surface resources. Where these resources are renewable, (e.g., timber, range), proper reclamation measures may restore lost productivity. The 3809 regulations will involve the commitment of fuel previously not expended because reclamation was not required. Where resource values are non-renewable, (e.g., cultural/historic sites, threatened or endangered species), appropriate protective measures either can be incorporated into the plan of operations, or in the case of adverse modification of critical habitat which jeopardizes the continued existence of an endangered species, the plan of operation can be rejected if protective measures are not sufficient to avoid jeopardy.

Chapter 8

COMPARISON OF THE PROPOSED ACTION WITH ALTERNATIVES

INTRODUCTION

This Section describes and compares the proposed action (Draft 43 CFR 3809) with six alternative proposals. These alternatives, in order of analysis and review, include: (A) the Forest Service regulations 36 CFR 252, (B) the proposed BLM rulemaking 3809, published in the Federal Register, December 6, 1976, (C) the legislative, (D) the no action, (E) the more restrictive, and (F) the preferred alternative. The alternatives considered have common purposes which are to prevent unnecessary or undue degradation, to afford environmental protection of the public lands from activities conducted under the Mining Law of 1872, and to prevent impairment in Wilderness Study Areas. The main differences between alternatives one through three are procedural. The "no action" alternative allows the mining claimant to operate under some surface management restrictions (including air and water quality and solid waste management guidelines) imposed by the Federal and some State Governments to protect the environment. The following discussion is a brief analysis of these differences. The "no action" alternative is supplemented by Table 1-2 which summarizes the various State statutes and reclamation requirements.

ALTERNATIVE A

Adopt the Forest Service Regulations, 36 CFR 252 and apply them to the public lands.

From an environmental standpoint, the significant differences required by this alternative and not by the proposed action are:

1. Notice of intent.
2. Operator submits reclamation measures.
3. Plan of operations is neither approved nor disapproved if the plan has not been acted upon within 30 days or extension period.
4. No special provision for lands under wilderness review.
5. No provision to preclude mining in RARE II Areas.
6. Mining operations not restricted by "manner and degree" or "impairment."

When a "notice" is filed, the District Ranger will make the determination whether or not a plan of operations is needed when significant surface disturbance is likely.

The proposed action requires no "notice of intent." Rather, a threshold has been set (see 3809.1-2, Appendix 1) whereby the operator may do certain mining related activities without notifying BLM. Under this alternative, these activities would be considered to have little or no potential environmental impact, cause no "impairment" in Wilderness Study Areas, or have little or no potential for undue or unnecessary degradation of the public lands administered by the BLM.

The Forest Service has said that the "notice of intent" concept is working well. However, the proposed action eliminates the requirement for a notice of intent permitting the miner more flexibility in scheduling mining activities that do not potentially cause impairment or unnecessary damage. It will also reduce the amount of paperwork and review for both the mining industry and BLM. This would be in accordance with the spirit of President Carter's recent directives to reduce burdensome demands of the public and unnecessary paperwork.

A plan of operations under the proposed 43 CFR 3809 regulations will be required when an operator engages in mining operations as described in 43 CFR 3809.1-1 (Appendix 1). The requirements for a plan of operations are the same for BLM and USFS with one exception. The Forest Service requires the operator to submit measures to be taken to meet the requirements for environmental protection (reclamation plan) where the BLM is required to provide surface protection stipulations and reclamation measures under the proposed action. As a result, the differences in degree and types of impacts between the proposed action and this alternative are believed to be insignificant.

In an actual reclamation demonstration on a mining claim in Nevada it was suggested that BLM be responsible for telling the miners what they must do to satisfy reclamation requirements, since BLM has resource specialists whose backgrounds are renewable and non-renewable resources and multiple-use management. BLM agrees with this philosophy. BLM would develop mitigating measures, add stipulations and approve a plan of operations upon completing the environmental assessment which would be done on each plan submitted. It is expected that this will materially aid the small operator in compliance.

The Forest Service does not approve or disapprove a plan of operations if it has not been acted upon within the 30-day time limit or the extension period. BLM does not either. However, BLM would allow the operation to commence or continue under an unapproved plan. Essentially, under this alternative, the operator is forced to again check with the Forest Service to determine the status of their plan of operations. Under BLM's regulations the operator may proceed at his own risk under an unapproved plan fully realizing that when the plan is reviewed, it may be subsequently rejected by BLM. The intent of BLM is to act on every plan within the specified timeframes. However, it is recognized that some delay may occur if there are numerous submissions of plans of operations.

There could be some significant impacts to all resource values that could result from Alternative 1 (no action on plan of operations within 30 days or extension period) as well as under the proposed action which allows the operation to continue under an unapproved plan of operations. However, in either case, environmental impacts could be significant if surface protection stipulations and reclamation requirements are not imposed by the management agency. The proposed regulations 43 CFR 3809 give the responsibility for surface protection measures to BLM. When combined with existing air and water quality standards and solid waste management guidelines, environmental impacts to air, water, cultural and paleontological resources are expected to be minimal. Impacts to other resource values such as soil, vegetation, wildlife, visual and recreation would be high and localized in the area of operations.

In the Forest Service regulations there is a special provision for "wilderness areas" as there is in the proposed action. The Forest Service, however, has no provision or mandate from Congress to preclude mining in their RARE II areas. The mining operations under the Forest Service regulations are not restricted by "manner and degree" or "impairment" as operations are under the proposed action. In the wilderness section of the proposed action, operators with valid existing rights and grandfathered rights are exempt from the "non-impairment" standards. However, new operations and some old operations, which do not qualify under exemptions noted above, may proceed only in a non-impairing fashion. Some operations would, no doubt, be precluded.(see Chapter 1 discussion.)

Although this alternative has no provision for RARE II areas, the BLM still has the responsibility under Section 603 of FLPMA to manage WSA's so as not to impair the suitability of such areas for preservation as wilderness. The environmental impacts in WSA's would vary in accordance with the manager's ability to carry out the full intent of FLPMA, mainly Section 603.

In summary, there are six basic differences between this alternative and the proposed action as noted earlier. Insignificant impacts or the same impacts described in Chapter 3 are expected to result from five of these differences involving (1) notice of intent, (2) operator's responsibility for reclamation measures, (3) no special provisions for wilderness areas (4) restriction to "manner and degree" or (5) "impairment."

The most significant impact may occur if no action is taken on the plan of operations (as under this alternative) or the operation is allowed to continue without an approved plan of operations (as under the proposed action). As a result, surface protection stipulations and reclamation requirements may not be imposed by the management agency. Therefore, impacts are expected to be minimal with existing Federal and State standards except in the area of operations where impacts could be high.

ALTERNATIVE B

Adopt the proposed rulemaking 43 CFR 3809 as published on December 6, 1976.

Under this alternative, anyone contemplating a mining operation would be required to file a notice of intent with BLM. The authorized officer would then inform the operator whether or not a plan of operations would be required. The need for a plan would be based on what the authorized officer determined to be significant surface disturbance. In addition, two specific criteria which require the need for a plan are: (1) construction of access and (2) placing any structures on a mining claim. This differs from the proposed action which contains criteria for requiring a plan of operations (ref. 3809.11, Appendix 1).

Measures to minimize environmental impacts would also have to be included in a plan of operations by the operator under Alternative B. The proposed action would eliminate that requirement of the operator and would give that responsibility to the BLM or other surface managing agencies through stipulation requirements and approval of the plan of operations.

Many of the smaller operators do not have the resources to adequately prepare a viable plan of reclamation. Furthermore, since Alternative B requires a reclamation plan from all operators, the small miner could be placed in a difficult position of filing a plan that BLM may not accept. Therefore, under this alternative, the cost could be greater to the operator providing environmental measures than to the BLM as under the proposed action.

The proposed action eliminates the requirement for reclamation measures to be submitted by the operator as required in the original regulations. This is expected to save considerable time and money for both the industry and government by reducing paperwork and time-consuming review. The authorized officer will mitigate anticipated impacts and will provide stipulations for reclamation upon completing an environmental assessment on plans of operations. (See discussion in Alternative A.) In either case, BLM must approve of reclamation measures (as under this alternative) or develop the reclamation measures (as under the proposed action) to ensure adequate environmental protection is provided. As a result, the overall environmental impacts are believed to be insignificant.

Bonding under Alternative B was mandatory, whereas in the proposed action it would be discretionary. The need for a bond in the proposed action would be based on the degree of anticipated impacts and the past performances of the operators in minimizing environmental degradation. If the authorized officer chose not to impose a bond and the operator failed to comply with the terms of the approved plan, BLM could seek judicial action to recover damages. In the case of noncompliance, whether the bond is mandatory or discretionary, the environmental impacts to all resource values could be severe, whereas the environmental impacts

are believed to be minimal in the case of compliance with either the alternative or the proposed action.

Alternative B provides for automatic approval of a plan if the authorized officer fails to act on the plan within 30 days or the 60-day extension. The proposed action modifies this somewhat by permitting mining operations to proceed with an unapproved plan. However, if BLM at a later date finds that operations under the unapproved plan are impairing the wilderness suitability or that there is unnecessary or undue degradation, the authorized officer shall notify the operator that the operations are not in compliance with the regulations and what changes are needed. (Refer to discussion in Alternative A.)

The overall effect of the difference between the alternative and the proposed action on the environment is believed to be in the same manner and to the same intensity as described in Chapter 3. However, the proposed action would provide an opportunity to mitigate the environmental impacts, if any, through stipulations prior to approval of the plan of operations.

Alternative C

There are several alternatives that would require some degree of legislation to implement. These legislative changes would include: 1) one to give more authority to the Secretary than presently exists in Section 302(b) of FLPMA, to impose stringent environmental standards on mining operations which can be imposed regardless of the economic and technological impracticability of those standards; 2) various leasing proposals; and 3) modification of the Mining Law of 1872 to provide specific authority to require posting of bonds to secure against environmental damage and to retain surface ownership in the United States after patent of the mineral deposit.

--Stricter Environmental Standards

The general management standard under FLPMA is to prevent unnecessary or undue degradation (FLPMA § 302(b); 43 U.S.C. § 1732(b)). Section 302(b) of FLPMA further states that the Mining Law of 1872 is only amended to the extent specified in Section 314 (recordation of claims), Section 601 (California Desert Conservation), Section 603 (WSA's), and the management standard of 302(b) (unnecessary or undue degradation). Under the latter management standard, the Secretary is authorized and required to take some steps to prevent or minimize those environmental impacts due to mining activity which are avoidable. However, it does not go so far as to authorize him to take steps to prevent any and all impacts. This is evident by the use of the word "unnecessary." This implies that he may permit some necessary impacts which can not be prevented because steps necessary to prevent those impacts are too expensive (to the point of making an entire operation uneconomic), technologically impossible, or highly impractical. He can only hope to minimize those impacts. This is evident by the environmental standards

in the proposal which require, in those areas where the Secretary is not constrained by other mandatory environmental laws (e.g., air, water, solid waste, endangered species), that the operator "control or minimize" impacts and "prevent" only where "practicable."

An alternative to this approach would be to seek legislation which would give the Secretary the authority to impose environmental standards in all areas (air, water, visual resource, reclamation, wildlife, etc.) which require prevention of any or all impacts and require the highest possible standard of reclamation. In the area of reclamation, this alternative would require that the land disturbed by mining operations be reclaimed so the impacts will be substantially unnoticeable. Activities would be permitted under the following conditions: (1) The land must be reshaped to approximately its original contour or to an appropriate contour considering the surrounding topography so the disturbance will be substantially unnoticeable, (2) the reshaped lands must be restored to a stable soil condition consistent with its premining productivity and capable of supporting all uses that the land was capable of supporting when the mining operations were authorized, and (3) the land must be revegetated to provide a vegetative cover capable of self-regeneration and equal in permanence to its vegetative state when the mining operations were authorized. Because the Secretary would have and exercise more authority to impose much stricter environmental and reclamation standards on mining, the impacts of this alternative are bound to be less than those which would occur from implementation of the proposed action. However, if it is practicable to impose the more stringent standards in certain circumstances (in areas which are the most amenable to successful reclamation), then the impacts from the alternative and the proposed action may not differ substantially.

--Leasing Alternatives

Representative of a number of leasing bills which have been introduced in Congress over the years are H.R. 9292 and S.366. In the 95th Congress, H.R. 9292 was introduced to replace the entry and location system of the Mining Law of 1872 with a leasing system. Hearings on that bill (along with H.R. 5831 discussed below) were held. (See Mining Law Reform: Hearings on H.R. 5831 and H.R. 9292 Before the Subcommittee on Mines and Mining of the House Committee on Interior and Insular Affairs, 95th Congress, First Session 1977). An additional hardrock leasing bill (S. 366) was introduced in the 96th Congress, which although pending, will probably die. Both H.R. 9292 and S. 366 would have required exploration licenses and development leases. S. 366 required prospecting leases as well.

H.R. 9292 gave a priority right to lease a certain area to the holder of an exploration license, if the Secretary determined that the proposed operation 1) was compatible with the land use for the area, 2) did not violate any applicable laws and regulations and 3) in the judgment of the Secretary, the value (in terms of mineral production and foregone surface uses) exceeded the costs (including environmental costs).

Both H.R. 9292 (Section 116) and S. 366 (Section 211) required the Secretary to issue regulations which insured that hardrock mineral activities would avoid environmental damage. Specifically, H.R. 9292 required the Secretary to take into account environmental and economic costs, as well as environmental damage. In addition, H.R. 9292 contained a specific environmental protection standard that required impoundment of tailings. S. 366 required the Secretary to achieve certain objectives through the regulations, to the extent or as soon as feasible, taking into account the policies stated in S. 366. H.R. 9292 specifically required that prior to any activities on either an exploration license or a development lease, the operator must file a plan of operations. S. 366 stated that the Secretary shall establish standards and procedures for addressing its policies.

A comparison of the provision of both these bills with the proposed action reveals that they address the question of environmental protection in a similar manner. If there are any differences, the provisions of H.R. 9292 are the most stringent. Although the terms of the regulations under H.R. 9292 and S. 366 are unknown, these bills specifically address the very similar reclamation and environmental standards that are included in the proposed regulations 43 CFR 3809 with one exception; H.R. 9292 contains a requirement for impoundment of tailings. Under the 3809 regulations, the authorized officer would be responsible for review and approval of the plan of operations and may require impoundment of tailings. In essence, the surface protection requirements for the two bills and the proposed action are essentially the same. Therefore, the differences in environmental impacts of the alternatives, as compared with the proposed action are believed to be minimal or insignificant in the case of those operations for which a lease which might be issued under the alternative leasing bills. However, because of the greater amount of authority the Secretary has under these leasing schemes not to issue leases, the environmental impacts of implementing this alternative will be less than the proposed action.

The leasing schemes would provide additional environmental control beyond that of the proposed action since, in their terms, the fee interest in the lands would not pass from the United States by patent. Presently, under the Mining Law of 1872, a mining claimant who satisfies the requirements of the statute can purchase title to his claim from the United States. Once title has passed by purchase, the regulations which comprise the proposed action would no longer apply to operations conducted on that land, except for mining operations in the California Desert pursuant to Section 601(f) of FLPMA. Neither bill is clear as to its application to Wilderness Study Areas. Presumably, the provisions of Section 603 of FLPMA would control and the environmental protection stipulations, which would condition activities under either bill, would reflect that.

--Modification of Existing Mining Law

A third legislative alternative is that presented by H.R. 5831 introduced in the 95th Congress. That bill would require bonding to

secure payment of damages to surface resources of the United States. It also specifically applies Sections 603 (WSA), 601(f) (California Desert), and the last sentence of paragraph (b) of Section 302 (prevention of unnecessary or undue degradation) of FLPMA to mining claims located pursuant to H.R. 5831's provisions. H.R. 5831 provides the filing of a plan of operations as an alternative in applying for a patent to the claimed land. There is no requirement, however, that the plan set forth any proposed methods of environmental protection or mitigation of impacts. Again, as with present law, upon patenting of the mining claim, title, both to the mineral and the surface, would pass to the mining claimant and out of direct Federal regulation. It should be noted that there is some ambiguity on this last provision. It may be, under H.R. 5831, that only the mineral deposit would be patented, in which case the surface would remain subject to regulation under FLPMA. Therefore, under H.R. 5831 environmental impacts may be less than impacts resulting from the proposed action where the surface and mineral deposit once patented are not subject to the proposed regulations.

The only specific provision concerning environmental matters in H.R. 5831 is that it does not exempt a mining claimant from compliance with applicable Federal, State and local laws. Since a claimant under H.R. 5831 would be subject to the provisions of Sections 603, 601(f) and 302(b) (last sentence thereof) of FLPMA, it seems likely to postulate that any regulations issued pursuant to FLPMA affecting activities under H.R. 5831 would be very similar in nature to the proposed action.

Overall, with minor exceptions, there are no significant differences between operations under H.R. 5831 and the proposed 3809 regulations. Therefore, the environmental impacts (except as mentioned above) to all resource values are insignificant.

ALTERNATIVE D

Under the "no action" alternative, mining claimants would continue to operate under conditions imposed by Federal and State Laws. Although the Federal requirements are firm, adherence and/or enforcement is highly variable resulting in environmental degradation, varying in degree from locality to locality. For example, as indicated in Table 1-2, more stringent State environmental requirements are imposed in some States (i.e., California and Wyoming) whereas, no environmental requirements are imposed in other States (i.e., Alaska, Arizona and Nevada, New Mexico, and North Dakota).

Present operations would continue, subject to existing Federal and State requirements such as air, water, applicable laws and solid waste and others to protect the environment. Generally, the environmental impacts resulting from the "no action" alternative would be greater in States having little or no environmental requirements, and conversely, environmental impacts would be less in States that imposed environmental requirements. Environmental impacts that may result from this alternative includes severe water quality impacts such as siltation of rivers and streams, non-point source runoff including possible heavy metal contamination, groundwater contamination, interchange between

aquifers, release of flow from artesian aquifers, degradation of downstream environments such as wetlands, prime farmlands, increased particulates from unpaved roads by increased off-road vehicle use for all activities, erosion of fertile soil, destruction of cultural and paleontological resources, unnecessary removal of vegetation, destruction of critical habitat for threatened and endangered species. As enforcement of existing statutes progresses within States, as new State legislation is passed, and as States upgrade environmental requirements overall, there should be a lessening in severity of impact levels discussed in Chapters 2 and 3. These impact levels may approach the levels produced by the proposed action.

Under Section 302(b) of the Federal Land Management and Policy Act of October 2 1976, the Secretary of the Interior in managing public lands shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of these lands. If not by regulation, then the Secretary must devise some other method to fulfill this commitment which may include State/Federal cooperative initiatives. The cooperative method offers at lease two situations discussed under this alternative. Mining operations could then be regulated through existing State/Federal cooperative agreements and master memorandums of understanding as indicated in Table 1-2, or regulated through cooperative initiatives to be developed in the future.

While this alternative may result in the fewest economic constraints as presently administered, strict enforcement of existing law could ameliorate ongoing environmental impacts and increase costs substantially. However, enforcement by BLM would be difficult to achieve since applicable laws, although considered and adhered to in BLM planning and operations are enforced by other agencies.

ALTERNATIVE E

The provisions of the regulations concerning lands under wilderness review (see Appendix I) allow impacts that may be reclaimed to the point of being substantially unnoticeable by the time the Secretary is scheduled to report to the President as to whether a Wilderness Study Area is suitable for prescription as wilderness. An alternative to those provisions would be provisions allowing (except for "grandfathered" uses, appropriation under the mining laws, and subject to valid existing rights) only uses that can be terminated at any time and the resulting impacts of which would be substantially unnoticeable in the Wilderness Study Area (WSA) as a whole. In other words, and for practical purposes, those activities which do not require a plan of operation as defined in the proposed 3809 regulations, would be the only activities allowed. If this alternative were adopted, it would be incorporated into appropriate sections of both the final 3802 and proposed 3809 regulations. This alternative would apply only to lands under wilderness review by the BLM, and it would implement the Bureau's interim management policy for Wilderness Study Areas. Specifically, this alternative would reflect the following interim management concepts referred to as the "nonimpairment" concept:

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"Any activity not compatible with wilderness designation would take place only if it is temporary (lasting less than a year), does not establish new rights or expectations of permanent uses that are incompatible with wilderness designa tion, and can be terminated at any time without leaving disqualifying impacts."

From a practical standpoint, this concept would greatly restrict the use of bulldozers and backhoes, and it would almost preclude the construction of new access routes except for grandfathered activities and valid existing rights.

For the purpose of this EIS, temporary use which could be terminated at any time and which left only substantially unnoticeable impacts would, in the opinion of the writers, have no additional adverse impacts on the environment. Rather, if this alternative is implemented, the impacts of mining operations, as identified in Table 3-1, would be lessened on lands under wilderness review. Public participants assert that this alternative would effectively prevent exploration for and development of minerals in WSA's. Minerals values, unlike other resources such as timber, wildlife, range, watershed values etc., can not be readily inventoried. Precluding exploratory methods might foreclose a discovery that could otherwise occur. Thus, important geological and mineralization data unobtainable by any other means would be eliminated from consideration in Wilderness Study Areas.

A discovery of valuable minerals could preclude establishment of the WSA as a wilderness area. Conversely, elimination could forestall dependency for certain minerals from other sources.

The unavoidable tradeoff of this alternative is the restriction of mineral exploration and development activities on lands under wilderness review. Based on preliminary results of the initial inventory process, this acreage will probably be less than 25 million acres, declining as the wilderness review, and Congressional action on the resulting recommendations, are completed.

ALTERNATIVE F -- Preferred Alternative

This alternative would raise the threshold level of the 43 CFR 3809 regulations to allow most exploration activities and some extraction activities to take place without a plan approval process, provided that associated disturbances be reclaimed by the operator.

The preferred alternative evolved as a result of the analysis of the written and verbal comments and the Bureau's questionable capability to implement the proposed regulations as described in the proposed action. The Bureau considers this approach to be a combination of the proposed action, Alternative A (Forest Service Regulations), and Alternative D (no action alternative). Alternative D mentions that the Secretary is not obligated to prepare regulations; rather the wording in §302(b) of FLPMA

suggests that he may, by regulations or otherwise, take any action necessary to prevent unnecessary or undue degradation of the public lands.

Several requests were made that BLM study the "Institutional Approach" as described on p.263 of the report "Surface Mining of Non-Coal Minerals" prepared by the National Academy of Sciences in 1979. That report suggests that strict regulatory mechanisms are not necessary to achieve an end result.

While this approach is regulatory in nature, implementation will be a monitoring and a cooperative effort by BLM and the mining industry to ensure that there is no unnecessary or undue degradation of the public lands. This concept requires reclamation to a reasonable degree of disturbed sites.

If at the end of two years, BLM determines that Alternative F is neithersuccessfully working nor meeting the Secretary's responsibilities to prevent unnecessary or undue degradation, the regulations will be reassessed and amended accordingly.

--Proposed Revisions

1. Plans of operations need not be submitted if surface disturbance is 5 acres or less per block of claims or project area in 12 consecutive months. In this case, a notice describing the operations would be required and should include a description of measures to be taken for reclamation. The notice must be submitted to the authorized officer ten calendar days prior to the commencement of the proposed operations. The notice will not require approval or bonding.

2. An operator would be required to report immediately the discovery of significant cultural or paleontological resources at any level of operations.

3. Upon completion of the work conducted below the threshold level set forth in point 1, a notice of completion of reclamation would be submitted to the authorized officer.

4. Reclamation Standards: Operators must agree that all tailings, dumps, deleterious materials or substances, and other waste produced by the operations are disposed of, arranged for, or treated so as to prevent unnecessary or undue degradation. At the earliest feasible time, the operator would be required, where practicable, to reclaim the disturbed surface by taking measures to prevent or control on-site and off-site damage to the public lands. Such reclamation would include:

    a. control of erosion and landslides;

    b. control of water runoff;

c. isolation, removal or control of toxic materials;

d. shaping and revegetation of disturbed areas, where reasonably practicable; and

e. rehabilitation of fisheries and wildlife habitat.

The authorized officer will provide guidence in the performance of these standards, where necessary.

5. The revised threshold level would not apply to:

   a. California Desert Conservation Area

   b. Areas of Critical Environmental Concern

   c. Wild and Scenic River Corridors

   d. Areas designated "closed" or "limited" to ORV's

   e. Designated Natural and Recreation areas, including the National Trail System.

6. The regulations would be clear that even activities occuring below the threshold level would be monitored by BLM to prevent unnecessary or undue degradation.

7. The "weekend" prospector or prospectors who cause only negligible disturbance will not be required to contact BLM at all. However, even casual users of the Public Lands will be responsible to prevent unnecessary or undue degradation.

8. A plan of operations would be necessary for all those activities exceeding the threshold and on those lands described in revision 5 above. In this instance, the plan approval process would be like the Forest Service regulations (Alternative A), that is:

   a. 30-day approval period - with an extension of 60 days if necessary. There would be no provision for the operators to continue without an approved plan. BLM would retain an open-end approval time period when it is necessary to do an Environmental Impact statement or when compliance is necessary with Section 7 of the Endangered Species Act and Section 106 of the National Historic Preservation Act.

   b. Bonding will continue to be discretionary if a plan is required.

In addition, this alternative would take out of the proposed action any mention of the regulations concerning lands under wilderness review (43 CFR 3802). BLM's intent to consolidate 3802 and 3809 regulations to include wilderness concerns was confusing to the public because of

difficulty in distinguishing the restrictions on lands under wilderness review from those on non-wilderness lands. Accordingly, the 43 CFR 3802 regulations, effective on April 2, 1980, would continue to apply to mining operations on lands under wilderness review.

The main difference of the preferred alternative over the proposed action is one of degree. The new threshold level would allow more operations to begin or continue without the delays that may be imposed on the mining industry by the proposed action of BLM's lack of personnel to handle the workload. Alternative F would require reasonable reclamation of all disturbances including those falling below the threshold, whereas there is no similar requirement in the proposed action. It is true that in some instances there will be a degree of unmitigated impacts that will create unnecessary damage. But these impacts are expected to be only temporary because BLM will monitor the operations to the extent possible to ensure that unnecessary or undue degradation does not take place. In cases where operators are uncooperative and will not alter operations to prevent unnecessary or undue degradation, the authorized officer may proceed as described in the non-compliance section of the proposed action.

Under the proposed action most operations involving any surface disturbance would require filing a plan. If the authorized officer did not timely approve the plan, the operator would have been allowed to commence with the operation at his own risk. Under the preferred alternative this is no longer true; the plan approval process will be consistent with the Forest Service regulations in which failure of the authorized officer to act grants neither approval nor rejection of the plan.

The preferred alternative should eliminate significantly the paperwork and "red tape" required by both BLM and the mining industry under the proposed action without circumventing the Secretary's responsibilities of preventing unnecessary or undue degradation as stated in §302(b) of FLPMA. It is the least costly and most efficient way to implement the regulations. The regulatory analysis discusses cost differences.

One of the more important aspects of the preferred alternative is that even more than the proposed action, it meets the responsibilities of the 1970 Mining and Minerals Policy Act, as cited in Section 102(a) (12) of FLPMA, which states:

> "the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands including implementation of the Mining and Minerals Policy Act of 1970 (84 Stat. 1876, 30 U.S.C. 21a) as if pertains to the public lands."

Section 2 of the 1970 Mining and Minerals Policy states in part:

> "The Congress declares that it is the continuing policy of the

> Federal Government in the national interest to foster and encourage prviate enterprise in...the orderly and economic development of domestic mineral resources...and reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities"

An important point to consider is that while the intent of 302(b) FLPMA and the 1970 Act is to "prevent unnecessary or undue degradation" and "to lessen any adverse impact of mineral extraction", neither Act, in and of itself, mandates the cessation of mining activities in the event of environmental conflicts. BLM's goal then is to allow activities necessary and incidental to mining operations and to ensure that associated disturbances are reclaimed in a reasonable time and manner.

This alternative is more sensitive to the concerns of small miners and their culture, whereas the proposed action may force some of them to lose interest in mineral exploration because of the burden that may be imposed on them in the plan approval process.

Chapter 3 discusses the impacts to air quality, water quality, soils, wildlife, vegetation, cultural and paleontological resources as they relate to the proposed action. Because the preferred alternative is a combination of the proposed action and the "no action" alternative, a comparison of impacts is in order.

Under the preferred alternative, mining operations exceeding the threshold would trigger the need to file a plan of operations and would therefore have the same anticipated impacts as the proposed action. However, the bulk of the exploration activities and some extraction operations may begin without a formal plan approval process, environmental assessments, or cultural and endangered species inventory. The primary concern, therefore, is that there would be unmitigated impacts which may lead to unnecessary or undue degradation much the same as would be expected in the "no action" alternative. In fact, there may be some unnecessary degradation as a result of poor judgement on the operator's part, especially in establishing the best location for access.

While these impacts may occur, the very fact that operators working within the threshold levels are required to file a notice no later than ten days in advance, will alert BLM and give them an opportunity to work closely with the operator especially if the operations are in sensitive areas. The Bureau's Recordation of Mining Claims and their inventory and planning system will also aid significantly in planning for mining operations.

The important consideration is that the operator must agree to complete reasonable reclamation under the preferred alternative whereas in the "no action" alternative this reclamation would not be assured. It should be recognized that even under the "no action" alternative (or any alternative) operators still must comply with all other Federal laws in

assessing clean air, clean water, solid waste, road standards (regulated by Mine, Safety and Health Administration), nuclear tailings and waste (regulated by the Nuclear Regulatory Commission), use of explosives (regulated by the Bureau of Alcohol, Tobacco and Firearms), endangered species, wetlands, etc., plus other State controls including cultural resources.

Many of the activities that would fall below the threshold concept of the preferred alternative would, under the proposed action, require a plan of operations. The impacts under either alternative could be the same if all proposed activities are necessary. For example, an operator may file a plan involving necessary activities that is approved without modification. Under Alternative F, those same activities may not require a plan, but simply a "notice" to BLM that the activities will commence. Under either alternative the impacts would be the same. Reclamation would also be required in both cases. The difference in the plan approval process is that there is a more formal assessment of the anticipated environmental impacts and additional time may be had to more fully assess the potential impacts to cultural values and endangered species habitat and other resource values. The end result is a more calculated assessment of the activities which would direct the operator to maintain environmental integrity rather than being concerned about reclaiming something that perhaps should not have been disturbed in the first place.

The preferred alternative provides for the greatest flexibility and is the least burdensome to the mining industry. In our opinion it will meet BLM's responsiblities to prevent unnecessary or undue degradation, to ensure that reasonable reclamation is completed and not discourage domestic mineral development. This alternative will provide a basis from which BLM and the mining industry may mutually work toward these objectives.

CHAPTER 9

CONSULTATION AND COORDINATION

The Draft Environmental Impact Statement notice of availability appeared in the Federal Register March 3, 1980. Proposed rulemaking procedures provide for a period of public comment; the initial period for comment on the DEIS was 60 days, closing May 2, 1980. However, due to requests for additional time, the comment period was extended to June 16, 1980. Two public meetings were held, one in Denver, Colorado on May 28 and the other in Reno, Nevada on May 30, where the public was invited to participate in commenting on the DEIS. Additionally, comments and testimony were received from diverse groups, agencies, companies, consultants and self-representing citizens. Federal and State Agencies addressed their comments to the adequacy of the DEIS and the proposed regulations. Most of the other commenters tended to offer broader statements in opposition to or in support of 43 CFR 3809. Those comments which addressed the regulations as well as the DEIS were analyzed by the appropriate officials to aid in the decision-making regarding the final regulations. The purpose of this section of Chapter 9 is to address those comments pertaining to the technical adequacy of the DEIS. No attempt will be made to categorize comments negatively or positively. All comments, written and oral, were examined by the Washington Office members of BLM to determine what modifications and revisions were necessary to strengthen and improve the DEIS.

Regulations Addressed

Letters received having comments addressing the proposed regulations will not be printed or responded to in this document. Comments specifically addressing the regulations will be responded to by:

- actual modification or clarification of the regulations.
- the preamble to the final rulemaking.
- the Regulatory Analysis, published as a separate document.

Those comments falling beyond the charge of this EIS tended to fall into broad categories or issues regarding the regulations, and are summarized as follows:

1. Authorized officer--Various points were raised about the authorized officer by a majority of commenters. They were concerned that the degree of authority may result in uneven implementation of the regulations, the background and experience levels, the specific identity of the authorized officer (a minerals person, the district manager, or a qualified designee).

2. Bonding--Many thought bonding to be prohibitive, others claimed that the various States already have bonding procedures and that this is duplicative on the part of the BLM, small independent operators are unbondable for the most part and this would reduce or curtail mining activities on the public lands.

3. Reclamation--Many considered reclamation requirements too severe, especially pertaining to rehabilitation to "approximate original contour." This would be financially burdensome to most small operators and perhaps prevent some from continuing to operate as independents.

4. Plan of Operations--Many were against the idea of filing a plan of operations if planned activities went over the threshold, but the major concern of this issue was the possible delay in approval or denial of the plan of operations, the 30 day and additional 60 day extension. The miners felt that BLM did not have the capacity to handle the projected submissions and that there would be further delay-imposing an undue time and financial burden on them. Many wanted a standard format developed for a plan of operations to insure uniformity.

5. Many commenters were concerned with BLM's ability to administer and implement the regulations, comparing manpower and money availability to land area to be covered. This was seen as the greatest single deterrent to effective implementation.

Denver Public Meeting

Thirty-five (35) people attended the Denver meeting with 7 registered speakers. The Bureau of Land Management panel consisted of Robert Anderson, Assistant Chief, Division of Mineral Resources, Washington Office; W. Brock Short, Natural Resource Specialist, Division of Onshore Energy Resources, Washington Office; Francis Cherry, Chief, Branch of Planning Coordination, Colorado State Office; and Roy McBroom, Chief, Branch of Energy and Minerals, Colorado State Office, presiding. The following persons, listed in order of appearance, presented testimony for the record;

Heather Noble
Douglas Smith, Jr.
George Reeves
Ray Robeck
Jim Yeager
Jerry Haggard

Public meeting testimony was reported by Federal Reporting Service, Denver, Colorado.

Six of the seven registered speakers addressed the BLM panel members at the public meeting. Their comments ranged from general issues to

specific problems. Generally, they felt the EIS was too vague, and that its brevity precluded substantive analysis. Their comments called for more specific and evaluatory discussions in the final EIS so it could act as a more discerning document. They felt the discussion of 43 CFR 3802 and 43 CFR 3809 together was too confusing. Conflicts in Federal policy were also mentioned.

Several comments were made by people representing the environmental interest. First, commenters felt there should be an alternative for stricter regulations. Regulations should not be relaxed to accomodate technology; rather technology should be improved to comply with regulations. Second, the DEIS did not include a discussion of the differences of impacts of the alternatives, nor did it discuss how irretrievable and irreversible commitments could be avoided. Third, they maintained the discussion of adverse impacts to the environment was too brief.

Comments on behalf of the mining interest involved several issues not addressed by the DEIS. They felt it was biased environmentally and did not take into consideration the effect of the regulations on personal initiative within the private sector of mining. The commenters believed the DEIS ignored the economic impact of the lengthy decision period, the effect of "over" regulation on jobs, national security, national need, and the transient reliability of imported minerals. Many of the comments addressed the regulations rather than the DEIS. Independent miners believed the regulations threatened their existence while the larger mining interest seemed to think they would be more comfortable with rules similar to the Forest Service regulations.

Reno Public Meeting

The May 30 meeting in Reno, Nevada was split into an afternoon and an evening session with a combined attendance of 150 people and 35 speakers. The BLM panel, presided over by Tom Owen, Carson City District Manager for the BLM, included Robert Anderson and W. Brock Short. The following people presented testimony for the record at the public meeting at the Centennial Coliseum in Reno.

Dan Stoney
A.W. Hampton
Jac R. Shaw
Douglas M. Miller
Charles Snow
Richard Harris
Cheryl Erwin
Patrick L. Fahey
Kenneth E. Anderson
Joyce Hall
Ray B. Hunter
Andy Hampton
Donald P. Frei
P. N. Martin
E. A. Hollingsworth
Marjorie Sill
Rose Strickland
Gordon Pine
George Bedford
Kim Bedford
James H. Bright
Bill Hall
Lee Smith
Hopkins R. Fitzpatrick
Bob Warren
Terral G. Young
David G. Hjelstrom
Theodore Naylor
Don Smith
Sandra L. Powers
Paul Noland
Fred Beeman
Bill Oriel
Glen Gordo
Larry Lackey

Public meeting testimony was reported by Marion S. Brown and transcribed by Linda T. Berolo, both of Bonanza Reporting, 1111 Forest Reno, Nevada 89509.

As in Denver, the comments ranged from general to specific. The majority of speakers viewed the DEIS as biased toward the natural environment. They felt the Minerals Industry text was inaccurate and misleadingly brief, putting the industry in a poor light. They believed the DEIS reflected prejudice on the part of the BLM, resulting in an inadequate document. Some commenters stated the DEIS was inadequate because of the lack of economic and social impact analysis. Most of the comments opposed the regulations. Of about 17 issues addressed by the speakers, 4 issues stood out:

1. Most felt the degree of authority held by the authorized officer was too absolute or dictatorial, which could result in abuse;

2. Thirty days plus sixty additional for plan of operation approval was attacked as too long. Many felt the "proceed at your own risk" clause was risky and costly;

3. Reclamation requirement of approximate original contour caused much concern; and

4. Bonding requirements were attacked as the "demise" of the "small" independent miner.

Other issues no less important were addressed. The inclusion of 43 CFR 3802 in the DEIS caused much confusion. Commenters challenged BLM's interpretation of FLPMA with regard to degree of required reclamation, claiming conflict with the 1872 Mining Law. Some doubted BLM's ability to administer the regulations with respect to money and manpower. Some commenters preferred the no action alternative while others stated that regulations resembling the Forest Service's surface management regulations would be acceptable. Still others wanted a specific format for a plan of operations, while some commenters stated total opposition to submission of any plan. Others feared the loss of confidentiality of proprietary information submitted through the plans of operations.

Much of the latter half of the second session was devoted to very specific questions posed to the panel by some of the speakers and from the general audience, on the same issues.

Letters

The following reproduced letters provided comment on the Draft EIS. Numbers corresponding to specific responses are inscribed in the left margin directly opposite comments. Many letters addressed the same issues; hence repetition of numbers. Numbered responses one through fifty-seven appear after the letters.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 24 1980

RECEIVED
APR 30 1980
OFFICE OF THE ADMINISTRATOR

Director
Bureau of Land Management
U.S. Department of Interior
Washington, D.C. 20240

Dear Mr. Gregg:

In accordance with our responsibilities under Section 309 of the Clean Air Act, EPA has reviewed the draft environmental impact statement entitled Surface Management of Public Lands Under the U.S. Mining Laws 43 CFR 3809. We have highlighted our major concerns below and our detailed comments are enclosed.

We commend the BLM for this policy analysis and for presenting the findings in a draft form for public review. We feel that this presentation reflects a good faith attempt to analyze actions necessary to balance mineral production with environmental protection. We also believe that this analysis will be helpful in considering the various legislative proposals for reform of the mining law of 1872.

Overall, we are pleased with the analysis presented in the draft and feel that it offers valuable insight into coordination of competing uses on public lands. We do, however, encourage BLM to further explore legislation containing high-level protection alternatives. We also encourage further evaluation of how air, water and solid waste standards will be met and maintained.

In accordance with our review system we have categorized this Draft EIS as LO-1; lack of objection - sufficient information. This categorization reflects the generally environmentally protective nature of the proposed regulations. We also believe that while there is sufficient information for decision making, incorporation of our suggestions for further analysis would greatly assist in selection of the "best" alternative.

Thank you for the opportunity to review this document. If you have any questions regarding these comments, please contact Andrea Myslicki (FTS 755-9408) of my staff.

Sincerely yours,

William N. Hedeman, Jr.
Director
Office of Environmental Review (A-104)

Enclosure

EPA's Detailed Comments on Surface Management of Public Lands Under the U.S. Mining Laws 43 CFR 3809

Mining in Wilderness Study Areas

The previously issued regulations (43 CFR 3802) on mining in wilderness study areas (Appendix IV of DEIS) contain 2 provisions that are inconsistent with, and less environmentally protective than the proposed general regulations, 43 CFR 3809. These conflicting sections concern the need for a plan of operations for mining activities beginning on or before October 21, 1976 (see 3809.1-3(c)(6) and 3802.1-3); and the definition of "permanent" impairment of wilderness values (see 3809.0-5(j) and 3802.0-5(d)). We believe the regulations at the indicated sections of 3802 should be changed to be consistent with the proposed 3809. This is also necessary, we believe, to ensure that BLM management of mining activity in wilderness study areas is in keeping with the Section 603 of the Federal Land Policy and Management Act and with BLM's wilderness inventory procedures. EPA previously commented on these aspects of the interim regulations at 3802 (see enclosed March 15, 1979 letter from William N. Hedeman, Jr).

We also believe there is a need for a plan of operations for activities existing on or before October 21, 1976, to establish a basis for BLM to make the necessary determination of whether ongoing activities can continue to be carried out in the same "manner and degree" as existed on October 21, 1976. The plan of operations should at least describe the existing "manner and degree" of activities in progress. In the case of "permanent" impairment, we believe that allowing damage to a wilderness study area that would not be reclaimed at the time of Secretarial consideration of the suitability of the area as wilderness, as in 3802, would unreasonably jeopardize the area's prospects for wilderness designation.

Enforcement of the Regulations

We are concerned with the continuation of adverse environmental impacts from mining operations. The proposed regulations at 3809.2 are extremely general as to the procedures to be followed by the responsible BLM official in conducting an environmental assessment and determining the necessary protective measures. (This point was also mentioned in the EPA comments of March 15, 1979).

We concur with the statement on page 47 of the DEIS that lack of uniformity in the enforcement of the regulation could result in the continuation of adverse impacts from mining operations. The regulations, as written, do not appear to enhance uniformity. We believe that the environmental assessment and protective measures should be developed using an interdisciplinary approach consistent with the CEQ/NEPA regulations. We also suggest that more specific criteria be developed to guide BLM's evaluation of plans of operation. Increased predictability in BLM evaluations would benefit both applicants and the public.

Approval of Plan of Operations

We believe that the regulations at 3809.3-2 and 3809.3-7 should contain guidelines for when to inspect operations and how to determine if operations are in compliance with approved plans. We also believe the regulations will not provide sufficient incentive for operators to comply unless they provide that the responsible BLM official shall seek an injunction against continued operations in cases of noncompliance. This seems particularly appropriate since there are no fines imposed for noncompliance, only payment of any actual damages. Guidelines for determining noncompliance would improve consistency and help prevent undue and unnecessary environmental damage.

We suggest that more guidance be added regarding when an individual bond will be required. To assure consistency, the criteria should be developed based on the magnitude of anticipated environmental impacts, not on some measure of past performance. This will insure that mining claims will be reclaimed in an acceptable manner.

We are concerned with the concept of "nonabsolute" standards discussed on page 9 of the DEIS. It states that in the case of nonabsolute standards such as these pertaining to fish and wildlife, that the sole criteria for determining the "reasonableness" of a standard will be the economic impact on the operator. We believe that effectiveness in achieving the desired level environmental protection should be given equal consideration in determining the reasonableness of a standard. Also, a discussion of environmental protection standards in the regulations should specifically include the need to comply with the Executive Orders dealing with floodplains and wetlands.

Alternative Four is the "No Action" alternative.

Alternative Five

We believe that the environmental impacts under the "no-action" alternative need to be more fully developed and described. Environmental impacts that would result from
9 this alternative includes severe water quality impacts such as siltation of rivers and streams, non-point source runoff including possible heavy metal contamination, and destruction of valuable wetland areas.

Additional Comments

We recommend that a range of probable mitigating measures be discussed in chapter four. The development of mitigating measures is crucial in assessing the environmental impacts of the proposed regulations. While we realize that mitigating measures will be developed on a case-by-case basis, we believe a discussion of various options and their resultant environmental impacts is appropriate.

AMERICAN MINING CONGRESS
FOUNDED 1897
RING BUILDING
WASHINGTON
D.C. 20036
202 861 2800
TWX 710 822 0126

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Executive Committee
Honorary

June 10, 1980

RECEIVED

Mr. Frank Gregg
Director
Bureau of Land Management
18th and C Streets, N.W.
Washington, D.C. 20240

Dear Mr. Gregg:

Re: Comments on Draft Environmental Impact Statement - Surface Management of Public Lands Under the U.S. Mining Laws, 43 C.F.R. § 3809

The American Mining Congress wishes to present comments on the Draft Environmental Impact Statement (EIS) for the proposed Bureau of Land Management regulations to control mining activities on public lands under the U.S. Mining Laws. We find the environmental impact statement, in general, over emphasizes environmental benefits and fails to recognize adequately the detriments the regulations will cause to the mining industry. We also find the draft EIS to be inaccurate in numerous respects. We will identify these deficiencies in the following specific comments.

The regulations of the Council on Environmental Quality for the preparation of environmental impact statements (hearafter "CEQ" regulations) provide that EIS's shall include discussions of "possible conflicts between the proposed action and the objectives of Federal . . . policies . . . ." (40 C.F.R. § 1502.16(c)). The policy of the United States with respect to mining is set forth in the Mining and Minerals Policy Act of 1970. This Act states that it shall be the policy of the federal government to foster and encourage private enterprise in the development of economically
1 sound and stable domestic mining industries and it requires the Secretary of the Interior to carry out the policy when exercising his authority under other programs as may be authorized by law (30 U.S.C. § 21a). However, the Mining and Minerals Policy Act is not mentioned as a poss ble conflict with these regulations. In fact, the purpose of the EIS is stated to be to assess the environmental impacts of the proposed regulations in order to meet the Interior Department's responsibilities under the Federal Land Policy and Management Act of 1976 and the National Environmental

Policy Act of 1969 (pg. 1). We find the absence of any discussion on this conflict particularly serious with respect to the standard prohibiting impairment of wilderness characteristics to be imposed upon BLM Wilderness Study Areas which will restrict or prohibit vast areas of BLM land from mineral exploration and development for an indefinite time.

On page 16 of the draft, there is a discussion concerning the uncertain future of the mining industry resulting from numerous identified problems. We believe it would be appropriate
2 to identify among those problems the difficulties being experienced in the closure and restriction of access to public lands by policies of the Department of the Interior.

The discussion on page 29 refers to plant communities being eliminated, changed or replaced as a result of unregulated mining operations. It should be recognized that the very nature of mining activities causes changes in plant communities whether they are regulated or not.

The statements regarding wildlife on page 32 seem to be over generalized by implying that the adverse effects identified always occur. The discussion should be more in the context that the effects possibly occur in some instances. Further, it should be recognized that there have even been documented instances in which wildlife benefits from the effects of mining such as the closure of surrounding areas to over grazing by cattle and the development of new water sources.

The statement is made on page 39 that operating plans which include areas containing endangered species of plants will either be revised to protect those species or if they cannot be protected, the plan will be rejected. There is no authority
17 either in the Endangered Species Act or in FLPMA to prohibit mining activities which do not cause undue or unnecessary degradation of the lands.

The discussion in chapter 3 on the socio-economic impacts on the mining industry is superficial and lacking in any meaningful identification of the extent of these impacts. The omission of such discussion may be based upon the erroneous conclusion stated on page 38 that:

> on a national scale, the proposed action is judged to have a minimal impact on total mineral production since the majority is produced from private lands.

4 This statement conflicts with the discussion on page 16 regarding the importance of public lands to the United States mineral supplies. It is correct that the majority of total mineral production in the United States may be produced from private lands but this is correct only because the majority is produced from patented mining claims which were formerly public lands. This production

could not have been developed if there had been a regulatory system applicable to those public lands which excessively restricted their exploration. In a recent report to Congress, the General Accounting Office found that restrictions on access and operations on public lands can seriously jeopardize or delay mineral exploration and development and cited as an example the estimate that Arizona contains 65% of the total U.S. copper reserves and that 70% of Arizona's land area is federally controlled
4 (The U.S. Mining and Mineral-Processing Industry: An Analysis of Trends and Implications, General Accounting Office ID-80-04, October 31, 1979). Further, the Office of Technology Assessment stated recently:

> Most domestic nonfuel mineral production has come from Federal land areas, which contain the bulk of the known domestic resources of a majority of the metallic minerals. Management of Fuel and Nonfuel Minerals in Federal Lands, Office of Technology Assessment, (1979), pg. 5.

The statement quoted above from page 38 of the EIS should be corrected.

On page 4 of the draft, it is stated that § 302(b) of FLPMA "expressly" provides that the Mining Law of 1872 is amended to require the Secretary to manage Wilderness Study
5 Areas so as to prevent their impairment for preservation as wilderness. This is an incorrect statement of fact with respect to any such express provision in FLPMA and an incorrect conclusion of law with respect to the interpretation of FLPMA.

On page 11 of the EIS, it is stated that, if proposed assessment work would impair the area's suitability for preservation of wilderness, the Secretary may grant a deferrment for a period not to exceed two years. The EIS continues to state that, at the end of the two year period, the mining claimant must find other ways of completing nonimpairing assessment work such as geological and geophysical work. If the restrictions imposed by the Secretary against performing assessment work in Wilderness Study Areas are not authorized, we are concerned that such deferrments may not be valid. Furthermore, even the alternative assessment work by geological or geophysical methods may not be used for more than two consecutive years or more than a total of five years. At least some areas of the public lands will be reviewed for wilderness suitability for periods longer than relief is available under these alternatives. The statements in the EIS should be clarified to recognize that the proposed regulations would cause some mining claims to become invalid for this reason.

Several subjects should be added to Chapter 2, the
2 description of the existing environment. One addition should be a discussion to identify the importance of the mineral industry to the national economy in terms of supplying the raw

materials on which the economy is based and on which the independence and defense of the United States rely. It should also be recognized that only a small area of the total land in the United States (0.16%) has been affected by mining activities and 1/3 of that has been reclaimed.

On page 33, it is stated that where dumps and spoil piles are located, the damage to cultural resources will be total. This statement is incorrect in that cultural resources are routinely studied and salvaged prior to surface disturbance taking place.

6 As stated in the American Mining Congress letter dated March 13, 1979 commenting on the proposed regulations to control Mining Law activities in Wilderness Study Areas, the standard for regulating these areas to prevent impairment of wilderness suitability is in error with respect to Mining Law activities. We urge the discussion beginning on page 35 of the EIS in this regard to be corrected.

7 On page 38, it is stated that the proposed regulations will require the disturbed surface to be restored as nearly "as possible" to the condition and use of the pre-mining activity. We believe this is an incorrect characterization of the requirements of the regulations as stated in § 3809.0-5 and is not authorized by FLPMA.

7a 35 Mention is made in various parts of the EIS that the extent to which the proposed regulations would interfere with mining activities and reduce the nation's supply of needed minerals from the public lands is not known. The CEQ regulations require that, where there are gaps in relevant information or scientific uncertainty, the agency shall weigh the need for the action against the risk and severity of possible adverse impacts and shall include a worst case analysis if the agency proceeds with the action. Instead of including a worst case analysis, or even an objective analysis of the adverse affects on the mining industry, the EIS seems to minimize these adverse affects at every opportunity. This is contrary to 40 C.F.R. § 1502.22.

35 8 The CEQ regulations also state that if a cost-benefit analysis is being considered it shall be incorporated by reference or appended to the statement. The notice of rulemaking at 45 Fed. Reg. 13958 stated that the Department of the Interior decided the proposal is a significant rulemaking and requires a regulatory analysis under Executive Order 12044 and 43 C.F.R. Part 14. Such regulatory analysis is not appended or referenced as required by 40 C.F.R. § 1502.23.

We will appreciate your consideration of these comments and the revision of the draft EIS accordingly.

Sincerely,

J. Allen Overton, Jr.
President

HO&M HOUSTON OIL & MINERALS CORPORATION

April 15, 1980

Director
Bureau of Land Management
U.S. Department of the Interior
1800 C Street, N.W.
Washington, D.C. 20240

Re: Draft E.I.S. on 43 C.F.R. Subpart 3809

Dear Sir:

I had intended to offer comments upon the Draft E.I.S. on 43 C.F.R. Subpart 3809 as a whole, but upon reading this document I discovered a statement so patently erroneous that it warrants separate comment.

On page 38 of the Draft E.I.S. there appears the following statement:

> "Mineral production from public lands may be hindered by implementation of the regulations because of impacts on the costs of developing marginal claims. However, on a national scale, the proposed action is judged to have a minimal impact on total mineral production since the majority is produced from private lands."

9 This is a serious misstatement of the facts regarding the importance of federal lands. For a more accurate assessment of the importance of federal lands, see Office of Technology Assessment, "Management of Fuel and Nonfuel Minerals in Federal Land" at p. 43:

> "Detailed records are not kept for production of hardrock minerals on Federal land unless they are produced from leases on Federal acquired land. Nevertheless, some idea of the importance of Federal land for hardrock mineral production can be obtained from the data on mineral production in the Western States because, as was pointed out above, 64 percent of the acreage in the Western States, including Alaska, is owned by the Federal Government, and most hardrock mines on what is now private land in the Western States

> have passed into private ownership through location on Federal land under the Mining Law. In 1975, the Western States produced the following approximate amounts of the Nation's domestic primary mineral supply: 92 percent of the copper, 84 percent of the silver, and almost 100 percent of the nickel. In fact, the bulk of the known domestic resources of a majority of the metallic minerals is situated in the West.
>
> "The role of Federal onshore land in the production of 14 representative essential mineral commodities is described in appendix A. Of the 14 mineral commodities, 7 (coal, copper, nickel, phosphate rock, silver, sodium carbonate, and uranium) have a relatively high potential for occurrence on Federal onshore land, 6 (geothermal steam, fluorspar, lead, natural gas, petroleum, and potash) have a more moderate potential, and 1 (iron ore) has only limited, but possibly locally important, potential. Even minerals with lesser Federal land potential may take on added significance when viewed within the context of national needs and the reliability of imports.
>
> "Figures 2.2 and 2.3 provide an overview of the importance of Federal onshore land for mineral exploration, development, and production. Figure 2.2 overlays the Federal onshore land map in figure 2.1 with the base and precious metal mining districts. Figure 2.3 shows the location of the major coalfields in the coterminous United States. As can be seen from the figures, most of the Nation's known mineral resources are concentrated in Federal land areas.
>
> "All the data support the conclusion of the Public Land Law Review Commission in its 1970 report that:
>
> > 'Present knowledge about the geology of mineralization in the United States, combined with the geographic pattern of established mining districts, indicates a strong probability that the public land areas of the West generally hold greater promise for future mineral discoveries than any other region.

272 MILWAUKEE - SUITE 408 ◻ DENVER, COLORADO 80206 ◻ 303-388-5766 ◻ TWX 910 931 2209

'Consequently, we have concluded that it is in the public interest to acknowledge and recognize the importance of mineral exploration and development in public land legislation.'"

Similarly, in "Final Report of the Task Force on the Availability of Public Lands" the Department of the Interior itself recognized, at p. 10, that--

"Lands administered by the Federal Government have long been a major source of the minerals, including fossil fuels, required to support our industrialized economy."

And in the "Draft Report on the Issues Identified in the Nonfuel Minerals Policy Review" the Department of the Interior again recognized, at p. 30, that--

"The mineral potential of Federal lands although largely indeterminate is nevertheless believed to be substantial . . . . Approximately one-third of all metallic and nonmetallic minerals produced in the United States in 1977 came from former and present Federal lands . . . . Four of the 12 commodities studied in this review come in substantial part from these lands."

In light of the information available to the author of the Draft E.I.S., it is difficult to understand how such a misstatement of the facts could have been made. In any event, the egregiousness of the misstatement is such as to vitiate the entire Draft E.I.S.

I suggest that another Draft E.I.S. be prepared which will reflect the fact that the proposed action will have "a serious impact upon the total mineral production of the United States since a substantial portion of all minerals, and a majority of some minerals, are produced from federal lands."

Yours very truly,

HOUSTON OIL & MINERALS CORPORATION

By _____
George E. Reeves
Associate Counsel
Minerals Division

GER/djs

HOUSTON INTERNATIONAL MINERALS CORP.
A Subsidiary of Houston Oil and Minerals Corporation

June 6, 1980

Director
Bureau of Land Management
1800 C Street, N. W.
Washington, D. C. 20240

Re: Draft E.I.S., "Surface Management of Public Lands Under the U. S. Mining Laws"

Dear Sir:

Set forth below are our comments on the Draft E.I.S., "Surface Management of Public Lands Under the U. S. Mining Laws".

By letter dated April 15, 1980 we submitted comments on one aspect of the Draft E.I.S. Those comments are not repeated here. Also, by letter dated May 12, 1980 we submitted comments on proposed 43 C.F.R. Part 3809. To the extent that the Draft E.I.S. deals with the substance of the regulations, we have not repeated the comments previously submitted.

[1] In the first paragraph under "Purpose" on page 1 there is a listing of the Department's responsibilities. Conspicuous by its absence is any mention of the Department's responsibilities under the Mining and Minerals Policy Act of 1970, 30 U.S.C. § 21a. That Act receives, on page 5 of the Draft E.I.S., the customary lip service. The Departmental policy mentioned on that page is not much in evidence aside from the regulation in which it is stated. 9

[2] On page 1 under "Summary of Program Alternatives" there are mentioned 5 alternatives to the proposed action. Unfortunately, the most logical and reasonable alternative is not mentioned at all. That alternative would be the promulgation of regulations not involving the vehicle of an approved operating plan but which would nevertheless provide for (1) the prevention of unnecessary or undue degradation of the lands, as to public lands generally,

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and (2) the prevention of unnecessary or undue degradation of the lands and their resources and the affording environmental protection, as to lands in wilderness study areas. The proposed regulations are cast in the same old "permits and approvals" mold with which the federal bureaucracy seems to have become infatuated. The basic philosophy underlying the "permits and approvals" approach to regulation seems to be that an intimate interinvolvement of the government in the day-to-day activities of the ordinary citizen, whether an individual or a corporation, is not only necessary but desirable. However, it is becoming painfully obvious to all concerned that such government interinvolvement is neither necessary nor desirable but, to the contrary, imposes real costs and burdens on government and citizens alike which far exceed the benefits which are claimed for, and sometimes achieved by, such an approach. Therefore, it is difficult to believe that there is not some viable, and likely better, regulatory alternative to the "permits and approvals" approach to the management of public lands in general and the prevention of unnecessary or undue degradation of the lands, etc., in particular. Such an alternative should be developed and seriously considered in lieu of the proposed regulations. 10

[3] Table 1-1 on page 2 of the Draft E.I.S. shows data for the year 1975 and Table 2-1 on pages 17 and 18 shows data for the years 1973 and 1974. It is difficult to believe that more up-to-date figures are not available. One gets the impression that in its haste to throw together a Draft E.I.S., the Bureau of Land Management seized upon the most convenient information at hand, even though more recent information could have been developed from the existing sources within the Department of the Interior. 11

[4] On page 3 it is stated that "this EIS is prepared as a total impact analysis on mining operations on the public lands", and in the last two paragraphs of the first column on page 3 there are several statements regarding the impact of mining operations on the environment. Similar statements appear on pages 47 and 51. These statements reflect a basic misunderstanding regarding the effect of the proposed regulations and the issues to be addressed by the Draft E.I.S. The assumption upon which this portion of the Draft E.I.S. appears to be predicated is that the proposed regulations 12

will authorize the conduct of mining operations on public lands which, without the proposed regulations, could not lawfully be conducted. The fact is that the proposed regulations will not, despite their "permits and approvals" trappings, authorize the conduct of any mining operations on the public domain which are not now authorized by law. Therefore, any discussion of the impact of mining operations on the environment is irrelevant, as the issue which should be addressed by the Draft E.I.S. is the impact of the proposed regulations on the environment.

[5] Table 2-1 on pages 17 and 18 of the Draft E.I.S. is represented as setting forth the "Major Locatable Mineral Production by State". In Colorado it is a well-known fact that molybdenum from AMAX's mine at Climax is by far the most important mineral product of the state, both in quantity and value. Nevertheless, molybdenum production in Colorado is not shown at all in Table 2-1 nor, more importantly, is its absence explained. The fact that tonnage and value figures may be unavailable does not mean that they can be ignored. Yet by ignoring these figures for molybdenum in Colorado, Table 2-1 would lead the unsuspecting reader of the Draft E.I.S. to conclude that molybdenum is not one of the "major" locatable minerals in Colorado. Indeed, molybdenum is not mentioned anywhere in Table 2-1, despite the fact that the principal molybdenum-producing states are Colorado, Arizona, New Mexico, and Utah, other molybdenum producing states being California and Nevada, all states listed in Table 2-1. In 1973, Colorado's uranium production was 1,888 thousand pounds, virtually as much as that produced by Utah. Nevertheless, the Utah figures were included in Table 2-1 while the Colorado figures were excluded. The haphazard manner in which Table 2-1 was culled from the 1974 Minerals Yearbook has destroyed any usefulness it might have had. Furthermore, the failure of the Draft E.I.S., in Table 2-1 or elsewhere, to set forth the total United States production of locatable minerals makes any meaningful comparison impossible. For example, in 1974, the total United States production of copper was 1,597,002 short tons, of which Arizona produced 54%, Utah 14%, New Mexico 12%, Montana 8%, Nevada 5% for a total of 93% in these 5 public land states, a fact not apparent from the information in the Draft E.I.S. Table 2-1 is deficient not because of 11

what it shows but because of what it fails to show.

[6] On page 4 the Draft E.I.S. discusses various sections of the Federal Land Policy and Management Act of 1976. Not discussed here or elsewhere in the Draft E.I.S. are two sections of the Act which bear directly upon the proposed regulations. These are Section 201(a) and Section 701(a). Section 201(a) provides, in pertinent part, as follows:

> "The preparation and maintenance of such inventory or the identification of such areas shall not, of itself, change or prevent change of the management or use of public lands."

13 Section 701(a) provides:

> "Nothing in this Act, or in any amendment made by this Act, shall be construed as terminating any valid lease, permit, patent, right-of-way, or other land use right or authorization existing on the date of approval of this Act."

The reason that these sections were not discussed in the Draft E.I.S. is, no doubt, that they were not given any consideration whatever in drafting the proposed regulations. Appropriate changes should be made both in the proposed regulations and in the Draft E.I.S. to acknowledge and reflect the existence of the limitations imposed by these two sections of the 1976 Act.

[7] On page 6 it is stated that the Forest Service regulations, 36 C.F.R. Part 252, are "similar in scope and purpose". To the contrary, the proposed regulations are much more stringent than the Forest Service regulations in many respects.

[8] On page 6 it is stated that the proposed regulations recognize the right "to go upon the public lands for the purpose of mineral prospecting, exploration, development, and extracting that mineral resource and ultimately
14 purchase the claims thereon". While the right may be recognized, the proposed regulations circumscribe that right far more than is authorized by the 1976 Act.

[9] On page 16 it is stated that "the mining industry . . . in the United States today faces a very uncertain future and many problems". The overregulation evident in
2 the proposed regulations is an excellent example of the kind of problems which will continue to produce "a very uncertain future". The Draft E.I.S. should be candid enough to admit that a large measure of the "many problems" faced by the United States mining industry are the direct result of Department of the Interior regulations and policies.

[10] Estimates on page 37 of the Draft E.I.S. of the number of plans of operation to be filed annually are probably much too low, by one or two orders of magnitude. The Forest Service experience is not a valid guide line, since the
15 Forest Service regulations do not require a plan of operations for prospecting, claim location, and many exploration activities. The proposed B.L.M. regulations, however, particularly § 3809.1-1, would require a plan of operation for most prospecting, claim location, and exploration activities.

[11] Virtually every day one reads that yet another federal agency or national figure has become alarmed at the extremely vulnerable position in which the United States has been placed by its dependence on foreign sources of supply for a whole spectrum of non-fuel minerals. The authors of the Draft E.I.S. seem to be unaware of this dependence, and view imports of minerals as a matter of concern only
16 in the context of competition with domestic minerals producers. See, e. g., page 38. To be adequate, the Draft E.I.S. should discuss in some detail our dependence on foreign sources of supply for locatable minerals and the extent to which this dependence will be exacerbated by the proposed regulations.

[12] On page 47 of the Draft E.I.S. there appears the follcwing paragraph:

> "These regulations, however, may result in the loss of certain available minerals deposits because of increased costs or conflict with other land uses or programs (threatened and endangered species and wilderness) or other resources. The extent of this is expected to be minor. The mineral commodities which would be involved cannot be predicted at this time."

The paragraph warrants a couple of comments:

[a] Nothing in the 1976 Act or elsewhere authorizes the Secretary of the Interior to cause a mineral deposit
17 to be lost merely because there is a conflict with "other land uses or programs . . . or other resources". To the contrary, the Secretary's authority is carefully limited in Section 302(b) of the 1976 Act.

[b] Whether the loss of a mineral deposit would be "minor" cannot be determined in a vacuum. The commodity
18 involved must also be taken into consideration. For example, the loss of a cobalt deposit which would eliminate our country's dependence on foreign sources of supply would be a major blow to the national security of the country.

[13] On page 53 of the Draft E.I.S. it is stated that "the proposed action eliminates the requirement for a notice of intent". It is not stated, however, that the proposed regulations require an approved plan of operations at an earlier point than the Forest Service regulations require a notice of intent. Therefore, the proposed regulations differ significantly from the Forest Service regulations in that much more paperwork will be required of the operator.

[14] On page 63 of the Draft E.I.S. it is stated that "because of . . . the short time period allotted to drafting this draft statement, other agencies having similar jurisdiction and/or expertise could not be consulted". It is quite evident that the Draft E.I.S. was assembled in great haste. Indeed, gross typographical errors in the document--references to "AIIIA small operator" (p. 14) and a "relatively high grade headframe" (p. 15)--indicate that the document was never even proofread. Internal evidence in the document indicates that it was completed in July, 1979. See, e.g., page 3 (mining claim data current as of June, 1979; final recording date of October 22, 1979 spoken of as being in the future); page 36a (wilderness inventory data as of July, 1979 inserted after pagination of original document was completed); page 63 (Draft E.I.S. scheduled for release in summer of 1979). Nevertheless, the Draft E.I.S. was not issued until March 3, 1980, eight months after the date it was completed. Despite the "urgency" cited by the Bureau

of Land Management (p. 63), the Draft E.I.S., and presumably the regulations themselves, were permitted to languish on the shelf for some eight months before being released for public comment. In the circumstances, it rings hollow to say that "because of . . . the short time period . . . other agencies . . . could not be consulted".

[15] The Draft E.I.S. contains more errors regarding the United States mining laws than one would expect in a document issued by the agency charged with the administration of those laws. A few of these are discussed below:

(a) The phrase "Mining Law of 1872" is repeatedly used as though it included all of the United States mining laws. The authors of the Draft E.I.S. should be aware that, aside from the Mining Law of 1872 and the various amendments thereto, the United States mining laws include portions of the Lode Law of 1866, 30 U.S.C. §§ 43, 46, and 51, por-
17 tions of the Placer Law of 1870, 30 U.S.C. §§ 35(part), 36, 38, 47, and 52, the Building Stone Law of 1892, 30 U.S.C. § 161, the Oil Placer Act of 1897, 30 U.S.C. § 101, and the Saline Placer Act of 1901, 30 U.S.C. § 162. The use of the bureaucratic buzz-phrase "Mining Law of 1872" should be discontinued in favor of the more precise and more professional "United States mining laws".

(b) On page 6 it is stated that "one who discovers a valuable mineral deposit has a statutory right . . . to go upon the public lands for the purpose of mineral prospecting, exploration, development, and extracting that resource". It is not only erroneous, but nonsensical, to say that the right to prospect and explore must be predicated upon a prior discovery. See e.g., Union Oil v. Smith, 249 U.S. 337 (1919).

9 (c) On page 13 it is stated that "exploration refers to those mineral activities taken to confirm the discovery". The author of this statement is apparently unaware of a long line of decisions of the Department of the Interior holding that exploration is the work done before discovery, not after. See e.g, United States v. Altman, 68 I.D. 235 (1961): "Exploration is that work which is done prior to discovery to determine whether the land contains valuable minerals."

(d) The paragraph on page 11 entitled "Deferment of Assessment Work" is such a congeries of errors that it must be considered in some detail: (i) The mere fact that the proposed assessment work would impair the area's suitability for preservation as a wilderness is not sufficient grounds for the granting of a deferment under 30 U.S.C. § 28b. Under that section the claimant must show that "legal impediment exist which affect the right of the claimant to enter upon the surface of such claim or group of claims to gain access to the boundaries thereof". 30 U.S.C. § 28b. (ii) The claimant cannot obtain a two year deferment; he can obtain only two one-year deferments. 30 U.S.C. § 28c. (iii) At the end of the period of deferment, the claimant must make up the deferred work. 30 U.S.C. § 28d. This important provision of the law is not stated. If geological, geochemical, or geophysical work could be used
18 as "make up" work, it could probably have been used initially and no deferment would have been granted. (iv) In any event, geological, geochemical, or geophysical work cannot be used for more than two consecutive years. 30 U.S.C. § 28-1. Therefore, if the claimant used geological, etc., work as "make up" work for the two years the assessment work was deferred, he could not use it for the work required for the then current assessment year. (v) The effect of the proposed regulations is that if the proposed assessment work would impair the area's suitability for preservation as wilderness, the claimant will not be permitted to do any further assessment work (let alone development or production) on the claim and the claim will in effect be forfeited. The Draft E.I.S. fails to recognize this and holds out the false hope that somehow the required work can be performed and the claimant's rights preserved.

[16] The Draft E.I.S. is replete with glaring inconsistencies and contradictions. These are no doubt the result of the slap-dash manner in which the Draft E.I.S. was apparently pieced together. For example:

(a) On page 3 it is stated that "this EIS is prepared as a total impact analysis of mining operations on the public lands", yet Chapter 3 of the Draft E.I.S. does not discuss
17 the impact of mining operations on the public lands but rather (and properly so) the impact of the proposed regulations on the minerals industry and the natural and socio-

oeconomic environments. Indeed, in Chapter 3 the reader is cautioned not to confuse the impacts discussed in Chapter 3 with the present situation and ongoing effects discussed in Chapter 2.

(b) On page 13 it is stated that it is "almost impossible" to describe . . . the scope or extent of mineral activity on the public lands", while on page 38 it is unequivocally stated that a majority of mineral production is from private land.

2 (c) On page 16 it is stated that "the extraction of locatable minerals is an important part of the economy of the United States", while on page 38 it is stated that hindering mineral production from public lands will have "a minimal impact on total mineral production".

In light of the foregoing comments, it seems obvious to us that the Draft E.I.S. is woefully inadequate and that no rational decision could be made in reliance upon that document. We see no alternative but to suggest that the Draft E.I.S. be rewritten in its entirety, taking into consideration the matters raised in our comments and in the other comments received.

Yours very truly,

HOUSTON INTERNATIONAL MINERALS CORPORATION

By _____
George E. Reeves
Associate Counsel

GER/djs

Molycorp, Inc.
Union Oil Center, P.O. Box 54945
Los Angeles, California 90054

union MOLYCORP

June 13, 1980

Director (210)
Bureau of Land Management
1800 C Street, NW
Washington, D.C. 20240

Director:

On March 3, 1980, the Bureau of Land Management released for review and public comment a Draft Environmental Impact Statement, Surface Management of Public Lands Under the U.S. Mining Laws, 43 CFR 3809. Molycorp, Inc. (a wholly-owned subsidiary of Union Oil Company of California), a minerals exploration, development and production company, takes this opportunity to submit comments on this document.

It is our opinion that the EIS is inadequate. Impact analysis is limited to natural resources, and a socioeconomic impact analysis is almost completely lacking. Mining is a basic industry which supports many other industries. Any major Federal action which changes the structure of that industry will have significant impact on consumers worldwide. A cost/benefit analysis is needed for the reclamation requirements. Reclaiming desert and high-altitude environments is extremely costly and often without widely recognized benefits. Specific comments follow:

Description of the Proposal

9 Page 4, Column 1: It is stated that "roadless areas or roadless islands, sec. 603(c), of five thousand acres or more possessing wilderness characteristics... are to be identified..." Roadless islands do not have to be five thousand acres or more for inclusion in the review process.

Existing Environment

1 Page 16, Column 1: Uranium mill tailings are singled out and identified as hazardous waste. This reference should be deleted. No justification is given for such a statement and it only serves to prejudice the report.

19 Page 16, Column 1: Reference is made to nine Western States which contain 33 percent of the total public land. These states are not identified.

Page 16, Column 2: "Earlier forms of exploration and mining resulted in more severe impacts directly and indirectly than upon the mining operator, the mining industry, and the Bureau of Land Management." This statement needs to be clarified.

3 Page 26, Column 1: "Toxic precipitates onto soils from fumes..." A discussion of what fumes are associated with open pit mining, or any other mining activity, is required.

Page 29, Column 2: "Destruction of any unique community would be a permanent loss to the ecosystem and to mankind in general." This is a very subjective and prejudicial statement, and should not be included in this section of the report.

Page 36, Column 1: Reference to pending final development of the interim management policy should be deleted. The interim management policy became effective on April 2, 1980.

No discussion of the importance of mining locatable minerals in the world market was discussed. Some minerals are not available worldwide, and the regulations and costs associated with the
2 requirements will have impact worldwide. In contrast, other minerals are mined in other parts of the world. The additional cost burden as a result of these regulations could render mining of these minerals uneconomical in a competitive market.

A discussion of the social and economic changes resulting from startup of locatable mineral activity was included in the description of existing environment, however, the reverse situation was not explored. Rapidly rising costs, labor problems, over regulation, and environmental problems contribute to mine closings which have as much impact as mine openings. The overlying social and economic situation resulting from cessation of operations due to increasing costs and regulatory burdens should be described.

The existing legal environment for the mining industry should be discussed. The proposed regulations list other Federal and State requirements for environmental protection, but the EIS does not discuss the impact of these existing laws. The Clean Air Act and the Federal Water Pollution Control Act already significantly
33 affect the existing environment as well as the mining industry. A discussion of the developing regulations on solid waste disposal is appropriate. The status of threatened or endangered species, cultural and paleontological resources and vandalism to survey monuments, all of which are adequately protected by existing law

should be discussed. Mining activities are already highly regulated by laws which are a significant part of the existing environment.

Environmental Impacts

Page 39, Column 1: Uranium tailings have been singled out as posing a threat to the environment. The statements made in the report on the danger of abandoned or poorly designed ponds are applicable to all forms of mining. No consideration is given to requirements of the Uranium Mill Tailings Radiation Control Act of 1978 (43 U.S.C.7901-7942). Nearly all states where uranium mining occurs have stringent regulations to protect the environment.

Page 39, Column 2: The report calls for automatic rejection of plans which would damage habitat of threatened or endangered plants. Past experience has shown that even when habitat of the threatened or endangered species is involved, all parts of the problem must be given consideration. An automatic rejection is not reasonable.

Page 39, Column 2: Areas not subject to 3809 regulations are not pertinent, therefore, the last paragraph should be deleted.

Page 40, Column 1: In discussing animals that adapt to mining operations, the report states that they are mostly rodents. This should be clarified; it contradicts the next statement that refers to birds, bats, and other species.

Page 40, Column 1: "These animals could be (except where high-walls provide habitat for cliff-nesting wildlife) adversely affected..." The portion in parenthesis should be deleted, there is an obvious adverse effect if the highwall is removed.

Page 40, Column 1: The purpose of the Endangered Species Act need not be met by this regulation. All operations that jeopardize threatened or endangered species are subject to review under the Endangered Species Act. The following sentence should therefore be deleted since it does not relate to the proposed regulations. "The purposes of the Endangered Species Act of 1973 will not be met by these regulations where disturbance may further jeopardize an endangered or threatened plant or animal species associated with mining operations on patented land."

Page 40, Column 2: Section 3809.1-1(d) of the proposed regulations would require a plan of operations for any mining operation using motorized vehicles over other than "open use areas and trails." Rubber-tired vehicles are not exempted under the regulation.

Air and water quality, endangered and threatened species and cultural resources are already protected by laws which are enforced by numerous agencies. A discussion of the negative impacts of duplicative enforcement of these regulations should be included in the EIS.

Increased mining costs from reclamation which render marginal deposits uneconomical to operate could have significant impacts nationwide. Some mining operations return to old mine areas to extract ores which were previously uneconomical to mill. Abandonment of a minesite until the marginal ore grades are economical to extract can greatly hold down consumer costs. If contemporary reclamation requirements can be relieved, a mine operator can reenter an area to extract low-grade ores rather than develop a new area. Additionally, relieving an operator of reclamation requirements to mine a marginal deposit may delay or stop development in more pristine areas.

Time delays imposed by these regulations can also have significant socioeconomic impacts. Mining is a basic industry with many dependent industries. Delays by excessive paperwork will have the greatest effect on the working class which can experience drastic labor reduction because of production delays.

Increased costs of mining because of reclamation requirements may not have significant benefits to the industry. A consumer who experiences inflation because of increased costs associated with a base industry is not likely to favor the mining industry because of nebulous aesthetic benefits several states away. A balance between economics and resource utilization must be obtained. Encouraged inflation cannot benefit many.

The proposed action will also be inflationary because of the need for increased government spending. If the Bureau of Land Management is to compete with industry markets for the specialists required to enforce these regulations, a significant budget increase is required. The cost/benefit analysis of this EIS did not consider costs to the public.

Adverse Impacts Which Cannot Be Avoided

This chapter is an inadequate discussion of the adverse socio-economic impacts of the regulations. The proposed rules are inflationary and will primarily affect the consumer and working class. Mineral commodities most affected by these regulations should be considered in relation to national and worldwide availability of them.

Relationship Between Local Short Term-Use And Long-Term Productivity

In many parts of the country, mining is the best land use. Many areas are not productive to begin with and mining is the best resource utilization. Timber, forage, wildlife habitat, water flows are non existent in many mining areas and should not be considered lost resources. The burden of reclamation will be placed on society since reclamation is extremely costly, time consuming and of little benefit. All costs are passed on to the consumer.

Irreversible And Irretrievable Commitment Of Resources

Reclamation itself can be an irretrievable commitment of mineral resources. As discussed before, contemporary revegetation requirements render low-grade ores unavailable.

If you have any questions or if we can be of any help, please contact me.

Very truly yours,

Noel Kurai
Manager, Environmental Affairs
(213) 486-7819

NK/th

UNION CARBIDE

UNION CARBIDE CORPORATION
METALS DIVISION

June 6, 1980

Director (520) BLM
18th & C Sts. NW
Washington, D.C. 20240

Dear Sir,

After careful study of the Environmental Impact Statement given in BLM Booklet "Surface Management of the Public Lands under U.S. Mining Laws 43CRF3809", I must conclude that the statement is lacking in its quantification of economic affects, and is not balanced in its discussion.

Public lands have multiple values and all can be realized with responsible, cooperative (rather than adverary) action by private companies and public officials. Most mining workers, especially in the Western U.S., love the out of doors and respect nature. (They could not endure the remoteness of most mine locations if this were not so.) The natural beauty can be protected at the same time the mineral values can be extracted for the public benefit. This combined desirable end cannot be obtained, however, by over regulation which prevents access to and location of the mineral resources.

The "statement" does recognize the importance of mining (e.g. p. 16 col. 1) but tends to regard all mining activity as bad and in citing the problems which the industry faces does not even mention, much less define, the impact of regulation (the very factor the EIS is supposed to evaluate).

Even in the EIS care should be used to define certain words. Specifically, "a valuable mineral deposit" should mean that enough mineralization is present to make logical the retention of that property by a prudent person--not necessarily the current marketability of a product at a profit--mineral prices fluctuate wildly and such profit may be quite time dependent. (p. 6 and p. 13)

Much more objective balance is needed in evaluating the affects of the regulations and the industry attitude. For example:

1. In describing the social impact of mining, the negative view is emphasized by emotional words such as "overcrowding", "shortages", "overloading", etc. The positive economic boost to a region, improved access for recreation (and for possible location of archeological values) are not even noted.

2. The descriptions of "boom and bust" (p. 18 col. 1) and the certainty of degradation of the quality of the natural environment (same page) apply to past, not "present" mining practices. Mines already have air and water quality regulations to meet and do so.

3. Much bias is revealed in the indictment of miners for poaching and "indiscriminate" use of off-the-road vehicles. Also why does camping create pollution when associated with prospecting any more than when pursued for recreation? In passing, note the overcrowding, pollution, etc. due to recreational use (not mining) at Yosemite, for example.

4. There is some but not sufficient recognition (and no dollar evaluation) of the affects of the regulations on mining costs and on delay of production. Please realize that the U.S. does need to develop its resources, and that competition from less regulated overseas operations does not permit the pass through of these costs (p. 38). The dangers of unnecessary reliance on imports should be obvious but is ignored in the EIS.

5. On page 38, the view seems to be expressed that "long term productivity" (grazing, recreation, wildness?) are good vs "short term economic returns" and "exploitive" uses. Why not have both? Also, I don't believe the emotional bias should be part of an objective evaluation. Mineral production which supports our standards of life should not be treated contemptuously.

6. The affects of mining operations on wildlife are exaggerated. When not harmed (and mine operations may even reduce local hunting) wild creatures are not always displaced. In my own experience, deer have frequently been found taking shelter in mine tunnels and mountain goats graze quite close to some mining operations.

In summary, as a statement of the impact of the regulations on the environment, this section of the booklet leaves much to be desired. The adverse affects of the regulations on mining--hence on the productive use of our mineral resources--have not been quantified--only dismissed as minor. The positive affects of mining have been minimized. Emotional,

not objective, viewpoints have been substituted for evaluation.

I look forward to a much more objective and improved Environmental Impact Statement.

Yours very truly,

W. N. Johnson

WNJ:rc

ANACONDA Copper Company
555 Seventeenth Street
Denver Colorado 80217
Telephone 303 575 4262

David L. Harris
Manager Government and Industry Analysis

June 16, 1980

Director (520)
Department of the Interior
Bureau of Land Management
18th and C Streets, N. W.
Washington, D. C. 20240

Dear Sir:

The Anaconda Copper Company appreciates the opportunity of commenting on the Draft Environmental Impact Statement (DEIS) assessing the environmental aspects of proposed regulations 43 CFR 3809.

We feel that the subject DEIS must be revised to:

1) more clearly address the impacts on the mining industry and the economy;

2) address the overlapping affect created by the inclusion in the proposed regulations of matters already clearly controlled by existing State and Federal laws such as the Clean Air Act and the Federal Water Pollution Control Act;

3) update the EIS to reflect conditions, in industry, government and the environment, as they exist today.

In general, we feel that the extreme potential these proposed regulations have for impacting the mining industry, in particular, and the economy, in general, warrant a much more thorough environmental assessment than has been, to date, provided.

Should we be able to provide further information, we would be happy to do so.

Very truly yours,

David L. Harris

DLH/LLS/jbh

ANACONDA Copper Company Division of The ANACONDA Company

THE STATE OF WYOMING ED HERSCHLER GOVERNOR

Department of Environmental Quality

LAND QUALITY DIVISION

STATE OFFICE BUILDING
401 West 19th Street

TELEPHONE 307 777 7758

CHEYENNE, WYOMING 82002

MEMORANDUM

TO: Robert E. Sundin, Director

FROM: W.C. Ackerman, Administrator

DATE: May 7, 1980

SUBJECT: BLM - Proposed and Final Hardrock Mining Regulations Issued/ Draft EIS

Summary of Proposal: The BLM has released a DES for the purpose of assessing the environmental impacts of proposed regulations (43 CFR 3809) to govern prospecting, exploration and mining activities for locatable minerals on public lands (public lands include split estates where the mineral estate is owned by the U.S.). The proposed regulations require a potential mining operator to file a "plan of operations" where any construction activities would occur including where earth moving equipment are utilized or activities are in areas of limited motorized vehicle access. An operator is required to submit maps, sketches and narratives to fully describe the proposed operation. The operator has the option of filing a reclamation plan and if he decides not to, the BLM will stipulate a reclamation plan upon approval of the proposal. The BLM shall conduct an environmental assessment for each proposed operation from which the reclamation plan is stipulated or approved. This EA will also be the basis from which the BLM determines whether an EIS is necessary. Existing operations will have 120 days after the effective date of the rules to submit a plan of operations. If the proposed regulations are implemented, the Secretary will direct a review of State Laws and Regulations relating to reclamation of lands disturbed by exploration or surface mining and if he finds such regulations provide at least as stringent environmental protection, the Secretary shall direct that such laws and regulations be applied as conditions of the proposed plan of operation and may enter into an agreement with the State to provide for a joint Federal-State program.

Authority for Proposal: It appears that BLM is justifying these regulations on the Mining Law of 1872 (30 U.S.C. Sec. 22 et. seq.), the National Environmental Policy Act of 1969 (42 U.S.C. 4371 et. seq.) and the Federal Land Policy and Management Act of 1976 (43 U.S.C. Sec. 1701 et. seq.).

COMMENTS ON DES

RE: Chapter 8. Comparison of the Proposed Action with Alternatives

24 While presenting alternative actions in Chapter 8, no alternative addressed the need for the proposed action on the basis of existing laws. Table 8-1 provides a summary of State reclamation laws and it appears that the proposed action would create an unnecessary dual regulatory process in many states where adequate protection is now provided by state law. The 10 BLM should assess, within this DES, the need to implement such programs in certain states and not wait until after the program is implemented to then assess state laws and the need for the regulatory program.

COMMENTS ON APPENDIX "I" - PROPOSED REGULATIONS

I. RE: §3809.1-1 and .1-2, When a "plan of operations" is required

(a) From the regulations contained in these two sections it appears that a "plan of operations" is required whenever there will be substantial disturbance to the natural terrain. Why not simplify the regulations by putting them into this context and defining the type of disturbance that would necessitate an approved plan of operations.

(b) The requirements of a "plan of operations" including an EA would cause an undue hardship on an operator whom wants to do exploration work and does not contemplate significant environmental degradation. This would include exploration ventures that consist of an occasional blading of a road and digging mud pits. A more reasonable procedure is the "notice of intent" which does not require approval but does provide the regulatory agency with an idea of where the operator will be working, what sort of restoration will be conducted and the regulatory agency can bond for such activities.

II. RE: §3809.1-7, Existing Operations

Where existing operations are already authorized by state law that requires similar planning and environmental reclamation, such operations should be exempt from compliance with this section. Existing operations should not be subject to the compliance requirements of these regulations and then later, after the Secretary makes a review of state laws, released from compliance with a redundant regulatory program. (See comment on DES, Chapter 8).

III. RE: §3809.2-1.(c), Environmental Assessment

There should be discussion in the regulations as to how the public is afforded the opportunity for input where an EA is conducted, i.e. notice requirements and time periods for review and comment.

IV. RE: §3809.2-1.(d)

Where there are split estates, who will do the EA and what input and rights does the surface owner have in the planning, setting of standards and approval process.

V. RE: §3809.3-1, Applicability of State Law

See comments on §3809.1-7 and on Chapter 8 of the DES.

GB:WCA:lv

April 7, 1980

Director, Bureau of Land Management
1800 "C" Street, N. W.
Washington, D. C. 20240

Dear Sir:

The following are comments on four pages of the Environmental Impact Statement, Surface Management of Public Lands Under the U. S. Mining Laws 43 CFR 3809. Basically, I find that the B. L. M. has limited knowledge of the mining industry. Many statements from page 13 to 17 reflect a 1950 approach to mining, rather than 1980 state of the art concepts and approaches to mineral exploration and production. In addition, no information on the cost of implementation of any of the alternatives is given.

I would urge the B. L. M. to adopt Alternative 4. The last thing the mining industry needs are more regulators who have no concept of what they are regulating. Most western states have agencies such as the Colorado Mine Land Reclamation Board already in existence to enforce reclamation plans.

2 Contrary to your statement on pages 13 and 14 of your EIS draft, mining does not start with surface prospecting, nor are the three basic activities of the industry prospecting, exploration and mining. There are at least seven 22b stages of mineral exploration and mining. The stages can be defined as: 1) reconnaissance phase; 2) project phase; 3) pre-development phase; 4) feasibility phase; 5) development phase; 6) production phase; and 7) reclamation phase.

Contrary to your statement on page 14, the reconnaissance phase of exploration may go on for up to two years prior to land acquisition. The reconnaissance phase is a conceptual phase. It starts with geologic models of mineral deposits. The models direct the explorationist to large areas that may have rock types and specific geologic environments that contain a deposit. Activities during this phase include regional geologic mapping, regional geochemical surveys, airborne geophysical surveys, region radon gas surveys, etc. The objective for these activities is to develop specific targets and acquire a land position.

One point to be emphasized is that concepts involved in developing geologic models are continually evolving. For example, prior to 1960 nineteen porphyry copper deposits were recognized world wide. In 1974, seventy-eight porphyry copper deposits were known. The reason for the increased discovery rates were studies by J. D. Lowell, J. Gilbert, and others of the alteration patterns and geologic settings for porphyry copper deposits. Such models allowed reinterpretation of data in areas previously examined and discounted.

Once a specific area is defined by reconnaissance programs, the project and evaluation phase begins. Contrary to your statement on page 14, drilling is only one activity of this phase. Drilling is used to evolve detailed geologic studies, ground geophysical surveys, and/or geochemical surveys. Drilling is used to test specific targets located by the project work. In uranium exploration wide spaced drilling is used to define regional areas of favorability and to locate anomalous mineralization. This work may be conducted over a period of 20 to 30 years to evaluate large blocks of ground, many times with no ore body being found.

The pre-development phase is close spaced drilling designed to define the shape, size and tenor of the ore. Holes must be drilled at specific locations at specific spacings to truly and accurately define the ore body. This phase causes the most intense surface disturbance but generally is easier to reclaim since the disturbance is concentrated in one area.

The feasibility, development, production and reclamation phases are self-explanatory. However, B. L. M. knowledge of the art here is lacking. For example, in your EIS there is no mention of hydrometallurgical processes which are beginning to be used in Japan and Sweden to refine copper ores without the use of retort smelters.

The B. L. M. assessment of mining (page 15) does not realistically address itself to the type of mining operation of B. L. M. lands. In the uranium fields, in any small lease operation utilizing a small stope, room and pillar mining is not discussed. Furthermore, the one reference concerning mining operations (U.S.D.S. INT-35) appears at best to reflect 1950 technology. For a more modern view, please refer to:

Bailey, R. V., and Childer, M. O., Applied Mineral Exploration With Special Reference to Uranium, Westview Press, 1977.

The section on mineral production is inaccurate and environmentally based. Nowhere in the section does the B. L. M. address the Minerals Policy Act of 1970, which is a directive by Congress to insure the United States of a solid resource base. The B. L. M. does not seem to be concious of the recent General Accounting Office study entitled, "The United States Mining and Mineral Processing Industry: An Analysis of Trends and Implications". This report shows the decline of mineral activities which subjects the United States to the threat of critical supply interruptions, major losses of jobs and job opportunities, and an alarming imbalance of trade aggravated by the importation of $9.9 billion of non-fuel minerals.

11 Table 2-1 on page 17 is inadequate and incomplete. The most blatant error is the omission of uranium, vanadium and molybdenum production within statistics for the state of Colorado. These commodities are the present base of mining activity in the state.

I find it very discouraging that of the four pages of the EIS draft I reveiwed on the mining industry, that so many errors and inaccuracies are presented as fact. What disturbs me further is this question: "How can the B. L. M. regulate the mining industry when the agency has no concept of how the industry operates, and no knowledge of federal legislation encouraging mineral production?" Furthermore, no information is given on the cost of implementation of any of the options presented. 8

I would urge the B. L. M. to adopt Alternative 4. In these times of inflation with emphasis on the reduction of federal spending, it is imperative not to duplicate regulations by both state and federal government agencies, especially when the federal agency has demonstrated a lack of knowledge of the industry they attempt to regulate.

Very truly yours,

James R. Yeager
P. O. Box 252
Norwood, Colorado 81423

cc: Ray Kogovsek
Bill Armstrong
Gary Hart

STATE OF COLORADO RICHARD D. LAMM, Governor
DEPARTMENT OF NATURAL RESOURCES
D. MCNITE PASCOE, Executive Director
1313 Sherman St., Room 718, Denver, Colorado 80203 839-3311

Board of Land Commissioners
Division of Administration
Division of Mines
Division of Parks & Outdoor Recreation
Division of Water Resources
Division of Wildlife
Geological Survey
Oil and Gas Conservation Commission
Soil Conservation Board
Water Conservation Board
Mined Land Reclamation

Director (3101)
Bureau of Land Management
1800 C Street NW
Washington, D. C. 20240

Re: Surface Management of Public Lands Under the U. S. Mining Laws ; Draft Environmental Impact Statement

Gentlemen:

The Colorado Department of Natural Resources has reviewed the draft EIS prepared by the Bureau of Land Management concerning the proposed rules for surface management of public lands under the U. S. Mining Laws. That EIS examines mined land reclamation regulations to be administered by the BLM, or by states, under cooperative agreements with BLM.

As far as the state of Colorado is concerned, the major issues are possible conflicts and duplication of the BLM proposal with Colorado mined land reclamation statutes and rules and regulations . Specifically, it appears that the environmental impact of the proposed BLM rules and regulations will be insignificant in Colorado, because the Colorado Mined Land Reclamation Act (34-32-101 et. seq. CRS 1973 as amended) and implementing rules and regulations, apply to all land in Colorado, and those rules and regulations are both more detailed and more stringent than those proposed by BLM. We believe that the only significant activity which would result from the promulgation of the regulations would be the flurry of bureaucratic activity required in order for the BLM to determine whether Colorado would qualify under proposed Section 3809.3-1, which provides for cooperative agreements in those states which have laws at least as stringent as those set forth in the regulations. We believe that Colorado has such laws, and that the result of a thorough BLM review would be the negotiation of a cooperative agreement with the state of Colorado. 24

In general, the statement of policies and goals listed on page 5 of the draft EIS is identical to, or analgous to, the goals set forth in the Colorado Mined Land Reclamation Act of 1976. The purposes and policies of the draft regulations, and of the existing Colorado law, seem to be consistent and harmonious.

We have reviewed the proposed rules and regulations and have identified the following areas of possible conflict between state law or regulation, and the proposed BLM regulations . In each of the examples listed below the Colorado law or regulation is more stringent than that being proposed by BLM. The conflicts are as follows:

1. Under the BLM proposal operators are not required to file a plan for reclamation. Under the state statute the burden of proof is on the operator to provide an adequate plan for reclamation prior to issuance of a permit.

2. Under the BLM proposal, an operation may begin mining before the end of the 30 or 90 day period prior to final permit approval. Under Colorado statute, no operation may begin until a permit has been approved and adequate bond has been supplied.

3. The bond required for state permits must be adequate to cover the entire cost of reclamation as approved by the state, and is not subject to any maximum level of bond, provided the mining operation covers more than 10 acres. There is a state bond limit for operations affecting less than 10 acres.

4. The proposed BLM regulations require a court order in order to stop mining which is not in compliance with the regulations. Colorado law allows the Mined Land Reclamation Board to issue cease and desist orders to any person not in compliance with the act, or operating without a permit.

Page 38 of the draft Environmental Impact Statement states that one of the environmental impacts of the proposed regulations will be the economic cost of reclaiming disturbed surface areas and the cost associated with a performance bond. As far as Colorado is concerned, these costs will not be additional costs, because they are already required by state law. The draft EIS also states that the impact will be greater on small mine operators. Under the Colorado statute, operators who operate mines that affect less than 10 acres, and mine less than 70,000 tons of material per year may obtain a "limited impact" permit, which is less detailed, and easier to obtain, than a regular mining permit. However, a limited impact permit does require the same performance standards for reclamation.

Page 39 of the draft statement contains an error in the last sentence in the left hand column . The draft says that "mine tailings relative to uranium mining operations are finely ground and moved to the disposal areas in a water slurry." The sentence should probably be rewritten to show that the subject is mill tailings, not mine tailings. 9

In chapter 7 of the DEIS it is stated that the proposed regulations cannot be implemented on patented mining claims, and hence there may be irreversible or irretrievable commitment of natural resources on private lands. Colorado law regulates all mining activity, whether on patented land or not, and hence this limitation would not be true with respect to the continued operation of the Colorado statutes and regulations.

Finally, we note that in table 8-1 there is at least one major omission. An additional reclamation requirement not stated in the table is that under Colorado law an operator must "minimize disturbance to the hydrologic balance." 11

In closing, the Colorado Department of Natural Resources would like to reemphasize that Colorado has a mined land reclamation act which we believe to be as stringent as the regulations proposed by BLM, and which very clearly applies to all land in the state of Colorado, whether it is patented or unpatented, and whether it is federally owned or not. It is important for BLM to pursue federal reclamation regulations in states where there is no law requiring reclamation or in states where the current state regulations are demonstrably less effective than those proposed by BLM. However, as far as Colorado

is concerned, we believe that the BLM regulations, as proposed, would not make any difference to the operator as far as on the ground reclamation is concerned. If the regulations are in fact promulgated as proposed, we commend BLM for including a provision which authorizes cooperative agreements with states which have laws which are deemed to be as stringent as those proposed by BLM. We do believe that it is vital that all states have the opportunity to control and regulate mining within their border provided that the minimum federal standard, if established, is achieved.

These comments should be added to the comments previously sent to BLM by the Colorado State Clearinghouse.

Sincerely yours,

Hamlet J. Barry, III
Deputy Director

2984 Lida Lane
Sparks, Nevada 89431
May 29, 1980

Bureau of Land Management
Re: Surface Mgmt. Regulations
18th and C Street, NW
Washington, D.C. 20240

Gentlemen:

Attached please find a copy of my comments on your proposed Surface Management Regulations (43 CFR 3809) and draft Environmental Impact Statement. While those comments deal with specific sections of the draft EIS and regulations, I wish to stress my strong conviction that these regulations are unwieldy, over-restrictive, and poorly written, and will impose severe hardships on the minerals industry in this nation.

The minerals industry makes a vital contribution to the economy and to the strategic position of the United States. We currently are
2 facing domestic shortages and the increased need to import critical minerals; this is partly attributable to over-regulation by the federal government, and these proposed regulations will only exacerbate the situation. Entirely too little consideration has been given to the impact these regulations will have on the minerals industry; while protection of the environment and prevention of
21 unnecessary degradation are indeed important, they may not outweigh the effect of such regulations on an industry that is critical to our standard of living.

I submit that these regulations as written are unworkable, will cause costly delays, and will in many cases prohibit production of badly-needed minerals. I would suggest that they be entirely re-written, preferably with practical input from the industry itself.

I am employed in the minerals industry, and therefore I am directly effected by these regulations. However, I believe that the regs will impact all of us in the long run, and that those impacts will not be beneficial.

Sincerely,

Cheryl L. Erwin

Enc.

"Surface Management of Public Lands Under U.S. Mining Laws - 43 CFR 3809" - Draft Environmental Impact Statement and Proposed Regulations

(Comments prepared by Cheryl L. Erwin)

Comments pertain to the Draft Environment Impact Statement, the proposed regulations are referenced where pertinent.

CHAPTER ONE.
INTRODUCTION - Statement of Purpose (p. 1)

It is stated in this section that the goal of this rulemaking is to balance mineral production and environmental protection. It must be stressed that the minerals industry is of paramount importance to this nation's economy, particularly at the present time. Mining is one of the few sources of "original wealth" available to our economy. Mineral self-sufficiency is of increasing importance; reference is made to the attached table prepared by the Coalition for Responsible Mining Law, showing the Unites States' domestic production and import reliance for several strategic minerals, particularly in comparison to the Soviet Union. Any further restriction of the U.S. minerals industry must be avoided.

It must be pointed out that alternative number 4 (the so-called
25 "no-action" alternative) is a fallacy, and could better be phrased "no additional action". The minerals industry already is heavily regulated by various state and federal agencies.

DESCRIPTION OF THE PROPOSED ACTION

p. 8, pertaining to operations requiring a plan of operations

"5. The construction or placing of any mobile, portable or fixed structures on public lands for more than 30 days;"

As written, this requirement includes small tents, truck-mounted campers, or trailers, and does not specify whether they cannot be placed on any one site on the public lands for more than 30 days. Only structures of a permanent or long-range basis (full field camps , mine buildings, etc.) should require a plan of operatinns.

p. 8 "However, if [the operator] is not notified of any BLM decision before the end of the 30- or 90-day period, operations may proceed as set out in the plan of operations. This does not, however, constitute an approved plan."

The BLM must be required to approve, alter, or disapprove a plan of operations within a specified period of time. An operator may proceed without official approval after the 90-day period (incidentally, this is most of the average field season); however, the authorized officer may find the operator in non-compliance at an unspecified "later date" (3809.1-4(c)). A decision should be made and communicated within a reasonable period of time, preferably no longer than 60 days.

p. 8 A plan of operations is required for "7. any operation which may cause changes in a water course."

The word "changes" is too vague.

p. 8 "At any time during the conduct of approved operations, the BLM authorized officer or the operator may initiate a modification of the plan of operations to include new developments which were not included within the approved plan." The modification must be submitted within a period considered "reasonable" by the authorized officer (3809.1-6(b)); this makes no allowance for adverse climatic conditions, acts of God, or other forces beyond the control of the operator.

p. 8 "Those mining operations which are already in progress on the day the regulations become effective, may continue. However, within 120 days after the effective date of the rule, persons conducting those operations must submit a plan of operations."

Should this plan of operations be disapproved, or should changes be deemed necessary, an existing, functioning mine could be closed down or could be subjected to unforeseen costs and modifications. This could have many repercussions for people and communities economically dependent upon the mine, as well as destroying mineral production. No provision is made for any mitigating factors, or for compensation.

p. 8 The authorized officer may decide to impose a bond, and decides its amount (3809.1-8).

Places too much weight on the subjective opinion of the authorized officer. In addition, small operators may be prohibited from mining for economic reasons. In some states, this provision may require a second bond, where operators already must be bonded by the state.

p. 9 "The visual resources, fish, wildlife, and plant standards are also flexible nonabsolute standards. Like all similar standards in this section, the authorized officer is given a responsibility... to develop reasonable environmental protection requirements. The reasonableness of those nonabsolute standards will be based on the practical economic impact, including the value of the resources affected, they will have on the conduct of the proposed operations."

The criteria by which the value of affected resources and the reasonableness of the "nonabsolute standards' are judged should be fixed. Such determinations should not rest solely on subjective opinion.

p. 9 and 10 (3809.0-5(d)), pertaining to reclamation. The BLM
10 regulations define "reclamation" as reshaping (to approximate original contours), soil conditioning, and revegetation, and require that such reclamation be commenced, conducted, and completed "as soon after disturbance as possible without undue interference with mining

Comments - page 3

operations." Reference is made to the Forest Service regulations [Sec. 252.8(g), p. II-4], which set goals for reclamation, rather than defining set methods; this is a better approach.

10 In addition, reclamation to the approximate original contour is not economically feasible, and is of dubious environmental benefit. Costs of such reclamation would make many otherwise feasible mineral deposits too impractical to mine. No authorized officer should have the discretion to require reclamation to the approximate original contours. The Forest Service regulations require this only where "reasonably practicable".

p. 10 "If the area could not support any foraging activities before mining, the area need not be required to do so after mining."

Should read, "will not be required to do so after mining."

P. 10 - Assessment work

"Assessment work will be permitted only if the BLM determines that it satisfies the nonimpairment criteria. However, assessment work on claims which qualify under valid existing rights or the grandfather concept may, in fact, impair... If proposed assessment work would impair the area's suitability for preservation as wilderness, a deferment of annual assessment work...may be granted for a period not to exceed two years. At the end of that period, the mining claimant must find other ways 18 of completing nonimpairing assessment work, such as the geological geochemical, and geophysical work allowed by the Act of September 2, 1958."

This section may cause a claimant to violate federal assessment work requirements and thus forfeit his claim. Assessment work can be deferred for only two years; in addition, geological, geochemical, and geophysical work is allowed for no more than 2 consecutive years, and no more than a total of 5 years on any one claim. Such surveys must also be non-repetitive (30 USC 528-1). This requirement places an undue burden on the claimant, and may cause forfeiture of an otherwise valid claim. It must also be noted that the above surveys are considerably more expensive than the $100 per year requirement.

CHAPTER TWO.

p. 16 "In general, the mining industry (i.e., metals and nonmetals, excluding fuel minerals) in the United States faces a very uncertain future and many problems: rapidly rising mining costs, labor shortages, shortages of mining supplies and equipment, 2 labor strikes, competition from foreign sources, environmental problems and control, and the like."

This paragraph fails to mention the economic hardships imposed by federal over-regulation; it also points out why the minerals industry is deserving of some favor by the federal government.

Comments - page 4

2 p. 16 The social and economic impacts of mining activity listed here are overwhelmingly negative. The EIS fails to mention that identical impacts could result from any activity in an area.

P. 17 and 18: Table 2-1 is inadequate. Newer, more complete data is available from the USBM and USGS, and more current figures than 11 those for 1973 and 1974 should have been used. Many economically important mineral products are not mentioned in this table.

p. 19-36 - Existing natural environment.

All of the negative impacts described in this section could be caused by any industry or any group; they are not and have never been restricted to the minerals industry. This section displays an obvious, inflammatory bias. For instance, the section on Cultural Resources strongly implies that archaeological sites and other such 9 resources are ubiquitous and that destruction has been rampant; impacts of mining activity as listed include vandalism and theft. Such effects are distasteful to anyone, they are not a normal result of mining activity, cannot be assumed to occur, and have no place in such discussion.

CHAPTER THREE.

p. 37 "The net effect of these regulations as proposed should be a reduction in the severity in many of the various adverse 21 impacts resulting from mineral activities."

The fact that these regulations may also cause a serious reduction in mineral production and exploration does not seem to be considered.

p. 38 This analysis of the impact of these regulations on the minerals industry is totally inadequate. A full and detailed study of the economic and strategic impacts of these regulations must be made a part of this EIS. Among the misstatements in this section are:

4 a. The minerals industry is not "currently uncontrolled";
b. The listed benefits to the general public (reduction of soil erosion, reduction in water and air pollution, and reduction of mud slides and flooding) may not outweigh the accompanying potential reduction in mineral production;
c. The proposed action will not have merely a "minimal impact" on mineral production;
3 d. Costs on mineral commodities generally can not be "transferred to the general public"; many important mineral commodities are priced on the world market. Underselling by foreign competition simply puts U.S. producers out of business, and
e. It is doubtful that jobs created by the proposed action will 21 outweigh jobs lost by possible exploration and production cutbacks; jobs created by the proposed action are largely non-productive, tax-supported positions.

Comments - page 5

CHAPTER FOUR.

P. 45 "The impacts to the mining industry as presented in Chapter 3 can be mitigated through reasonable and cooperative administration of the regulations;"

26 This is true; however, these regulations contain few set guidelines and no guarantee that administration will be reasonable and cooperative. Many vital decision are left entirely to the "authorized officer" and will reflect his individual biases and prejudices.

CHAPTER FIVE.

p. 47 "These regulations, however, may result in the loss of certain available mineral deposits because of increased costs or conflicts with other land uses or programs (threatened and 4 endangered species and wilderness) or other resources."

Too little consideration has been given to this possibility; again, inadequate study has been done on the long-reaching economic impacts of a restricted minerals industry, and whether those impacts might outweigh some environmental concerns.

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA 22092

Memorandum

To: Director, Bureau of Land Management

Through: Assistant Secretary--Energy and Minerals MAY 5 1980

From: Director, Geological Survey

Subject: Review of draft environmental statement on Surface Management of Public Lands under the U.S. Mining Laws, 43 CFR 3809

We have reviewed the draft statement as requested in Mr. Hecker's letter of March 1.

Our concerns about total acreage likely to be involved in mining, data on mineral production, potential impacts on ground water, and availability of information on water resources are discussed in the enclosure.

for H. William Menard

Enclosure

Mining Laws

USGS Comments

9 Page 3, col. 1. The figures for numbers of claims filed could be put in perspective by mentioning that total mining activities have involved only 0.3 percent of the area of the United States. Even using the larger estimate of claims recorded (3 million), only 6 percent of public land would be covered. Moreover, only an estimated 5 percent of claims staked go to patent, and large-scale mining operations rarely are conducted on anything other than patented claims.

9 27 Page 15. Development of subsidence fractures during or after subsurface mining operations may provide avenues for pollutants to reach ground water; the potential for mitigation of such impacts through the regulations should be assessed.

27 Pages 15-16. Potential ground-water impacts resulting from the leaching or solution mining techniques discussed here should be considered in the environmental statement, and effects of the regulations on these impacts should be assessed.

11 Pages 17-18, table 2-1. Production of molybdenum is significant in Colorado and New Mexico and should be added to the table.

9 Page 21, col. 2, line 2. We recommend that the following information be added after the sentence "No interpretations are found.... only the reduced, corrected data":

"In addition to the Federal-State basic-data reports, information on selected references and brief descriptions of current investigations are compiled in a U.S. Geological Survey series called Water-Resources Investigations, published for each State. These publications may be obtained from the U.S. Geological Survey, Reston, Va., 22092."

28 Page 22. Mitigation of ground-water impacts related to acid mine drainage--particularly in relation to abandonment and degree of reclamation attempted--should be discussed.

United States Department of the Interior

HERITAGE CONSERVATION AND RECREATION SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO: W750

BLM
DES 80/5

[redacted] 29 [redacted]

Memorandum

To: Director, Bureau of Land Management (520)

From: Director, Heritage Conservation and Recreation Service

Subject: Review of Draft Environmental Statement for Surface Management of Public Lands under the U.S. Mining Laws, 43 C.F.R. 3809

This is in response to a March 1, 1980, memorandum from Acting Assistant Director Vincent Hecker requesting our review of the draft statement noted above.

34a The selected alternative offers few guarantees which would protect or minimize damage to cultural resources. Alternative 3, which requires bonding of mining operations to minimize surface disturbance, may prove more effective than the preferred alternative while conforming to the requirements of the Mining Law of 1872. Moreover, it can only be assumed that automatic approval of mining operations and initiation of unapproved operations will produce significant environmental impacts that may not be mitigated. The document should also address denial of mining permits because of unavoidable impacts to significant cultural or natural resources.

34b We note certain types of areas are singled out for discussion of impacts, including wilderness areas, roadless areas, and the California Desert Conservation Area. We feel this treatment should be extended to certain areas and resources within this agency's expertise and jurisdiction. Specifically, these include cultural resources, designated and potential trails under the National Trails Systems Act, designated and potential Wild and Scenic Rivers, designated and potential National Natural Landmarks and Land and Water Conservation Fund and Urban Park and Recreation Recovery Program lands.

34c With respect to cultural resources, the final environmental statement (FES) should reflect a commitment to follow the procedures contained in 36 C.F.R. 800 prior to mineral extraction or exploration. Briefly, these regulations require consultation with the State Historic Preservation Officer (SHPO) on the need for and type of survey(s) to identify historical and archeological properties, survey boundaries, application of National

Register eligibility criteria to identified properties, determination of the effect of the proposal on National Register properties or those eligible for nomination, and other 36 C.F.R. 800.4 procedures if such properties will be affected. If the SHPO indicates a need for survey prior to initiation of activities which disturb the ground, or monitoring of such activities by an archeologist, these actions should be carried out. The Advisory Council on Historic Preservation must be given the opportunity to comment on any sites determined eligible that may be affected by a project. Sites identified as eligible for inclusion in the National Register should be nominated.

The impact on National Scenic Trails, National Historic Trails, National Recreation Trails, and potential trails in these three categories, should be described. The FES should present mitigation measures to be employed to minimize adverse impacts.

The FES should contain a discussion of the proposed regulations as they will affect mining impacts on designated and potential Wild and Scenic Rivers under the Wild and Scenic Rivers Act. In particular, we suggest the following points related to this Act be covered:

34d
1. Section 3(a) rivers on BLM lands, together with associated management lands, where established claims are not present, are withdrawn from mining appropriation (This is contrasted with the Wilderness Act, which allows filing of claims until 1983).

2. Section 5(a) rivers on BLM land are withdrawn as well, for the time periods specified in Section 7(b) of the Act.

3. For Section 3(a) and 5(a) rivers, new patents convey title only to mineral deposits, and claims are subject to the Secretary's regulations.

4. Unperfected claims on Section 3(a) and 5(a) rivers are subject to the Secretary's regulations prescribed to "effectuate the purposes of the Act."

The President's 1979 Environmental Message and August 2, 1979, Directive to Federal Departments and Agencies, requires all Federal agencies to avoid or mitigate adverse effects on rivers identified in the Nationwide Rivers Inventory which HCRS completed recently. The effects of the proposed regulations on these rivers should be described in the final statement.

Major mining operations may include significant off-site impacts that affect recreational facilities adversely. The proposed regulations should include notification procedures for apprising State Liaison Officers of potential impacts to State or local recreation areas. The determination in the proposed OSM statement that site integrity is not critical to the scientific value of paleontological resources is incorrect. Community analysis, paleocurrent, life habit, stratigraphic position, and relative age determination all depend essentially on discovering paleontologic resources "in situ." Significant disturbance of such resources eliminates all scientific values except species identification and collection.

Harold Green
Chris Therral Delaporte

THE WILDERNESS SOCIETY

June 16, 1980

Director
Bureau of Land Management
U.S. Department of the Interior
Washington, D.C. 20240

Dear Mr. Gregg:

The Wilderness Society, joined by the National Wildlife Federation and Friends of the Earth, appreciates this opportunity to comment on the draft EIS (DES) for the proposed rulemaking for surface management of public lands under the U.S. mining laws. This DES is a welcome first step in the long-overdue regulation of hard-rock mining on BLM lands. However, the DES is overly summary in its estimation of effects, particularly in comparing alternatives, and could be greatly improved. The following is a list of questions we have, and additional areas to be developed.

The list is short for two reasons: first, we will be submitting our much more detailed comments on the proposed rules next month, prior to July 16th, and, secondly, we believe that BLM should move ahead expeditiously with the promulgation of these rules so at last there will be some BLM regulation of surface impacts on public lands in states like Arizona and Nevada, where state regulation is lacking.

29 1. Mineral Industry. The DES notes that small miners who cannot afford bonding and reclamation costs may be thereby limited in their operations and that "in turn, this may delay discovery of new mineral deposits." DES at 38. The DES should acknowledge the speculativeness of this statement, or, at minimum, cite to the literature casting doubt upon the significance of their discoveries. For example, the CEQ report, Hard Rock Mining on the Public Land (1977), reviews the various studies, including an AMAX survey, and brings out a number of conclusions that small miners play a very limited role in both the discovery and production of mineral ores. CEQ Report at 22-4 (attached). In describing impacts on the small miners, the DES should set out and explain this limited role (or, at least, give both sides of the argument, as the CEQ Report does).

1785 PENNSYLVANIA AVENUE N.W. WASHINGTON D.C. 20006
(202) 628-0444

3 The DES also states that "public involvement in determining environmental impacts may result in disclosure of information which may jeopardize an operator's claim." DES at 38. This unexplained statement appears to lay the foundation for decisions, such as a limitation of appeal rights to operators, which reduce public participation. We will discuss such issues in more detail next month. For purposes of the DES, the statement should be explained and justified or, better yet, removed altogether. After all, the proposed rules, Sec. 3809.5(b), expressly provide that BLM shall not disclose to the public information determined to be confidential or privileged.

30 2. Animals. The DES states that some animals adapt to and may even benefit from mining operations. DES at 40. The DES is certainly incomplete without as full a statement about the negative impacts on animals, such as those sensitive to man's intrusions, from mining operations.

The DES should also recognize that BLM can regulate operations on patented lands to the extent those activities may jeopardize an endangered or threatened species on public lands. For example, the timing and number of blasting operations could be regulated, under conventional principles of nuisance law, where they might disturb nesting or migration on nearby public land. We will be citing to recent and relevant case law in our July comments.

3. Socioeconomic. The DES states that court actions may result from the failure of operators to follow their plans of operations. BLM should add that forfeitures of bonds may also be used to enforce mining conditions. This sanction is often more effective in producing timely and straight-forward compliance and should be mentioned as less "intrusive" regulation than litigation.

9 4. Alternatives. In comparing alternatives, the "heart" of an EIS, the Bureau fails to analyze a number of the features that distinguish them and, where comparisons are made, fails to make needed estimations of effects. In these EIS's on generic rule-makings, even rough estimations would be more useful for informed public participation and agency decision-making than the largely non-committal statements in the DES.*

*Good examples of useful, rough estimates in an EIS on planning regulations can be found in the FEIS done by the Forest Service on the rules prepared under the National Forest Management Act. 44 F.R. 53928 (Sept. 17, 1979). The Forest Service identified eleven issues and

(continued)

Alternative 1. The DES states that BLM has a "cadre" of resource specialists who can prepare mitigation and reclamation conditions. This term is somewhat misleading since, in fact, BLM professional staff are very thinly spread and will be hard-pressed to process and enforce the rules. The CEQ Report (1977), for example, notes that there are only 2 geologists and one environmentalist for the Winnemucca District office (Nevada), an active mining area of 8 million acres.

A major failing of this comparison is that BLM does not seek at all to estimate the effects which may ensue from plans allowed to proceed without approval by simple lapse of time. The DES only says that due to this possibility surface protection conditions "may not be imposed" for some plans. DES at 54. Is there no way to estimate how many plans may proceed without review or to describe the types of effects possible (remembering that plans submitted need not have reclamation or
31 mitigation measures)? For example, what percentage of plans, not requiring EIS or ESA consultations, have taken longer than 90 days for Forest Service review? Does BLM expect a higher or lower percent? Of the 5,700 POO's expected to be filed annually with BLM, how many will be allowed to start by lapse of time? Is any estimation or description of effects possible? BLM states that savings in paperwork and delay justify the difference in plan approval from the Forest Service. Before we can evaluate this advantage, we need to know the associated environmental costs. The EIS should provide greater insight into this trade-off.

Alternative 2. A number of significant differences with the 1976 proposed rules are not compared. For example, the 1976 version provided for up to ten years for holding the bond after first vegetative planting, with five years as the required minimum. The proposed rules only allow five years as the maximum period of holding. Given the difficult conditions for reclamation in the states most affected by this rule-making (Nevada and Arizona, which have no state reclamation laws), see DES at 22-25, this change toward shorter bonding could well mean that bonds have to be released before the success of revegetation is fully determined. The result might be that lands end up unreclaimed or that BLM has to bear the expense of reclamation. We urge BLM to consider this difference and estimate the effects, and review other differences as well.

compared eight alternatives across a range of criteria, including, for example, criteria such as "amenity values," "capability to implement," and "public access to the decision process." The FEIS ranked all the alternatives, usually by number, according to the criteria. Such an approach provides greater uniformity and ease of analysis and comparison than does the exclusively narrative chapter 8 of the DES.

32a Alternative 3. The DES description of a "stricter environmental standard" indicates to us that BLM is not reading Section 302(b) of FLPMA to the full reach of its authority. BLM is not necessarily barred from imposing conditions which are "too expensive," i.e. to the point of making an operation uneconomical. FLPMA contemplates that some minimum, or "necessary" environmental protection is required in all instances. This is the starting point for regulation, not the profitability of the operation. If an operation is so marginal that the economics do not allow for reclamation at all, for example, BLM can still insist upon this condition, even if that effectively stops mining, because this important restoration is, under FLPMA, a prerequisite to the so-called "right" to mine (FLPMA "amends" the Mining Law to the extent that environmental protection is needed).

32 We urge BLM to develop a more detailed alternative based on a stricter (but, we believe, viable) reading of Section 302(b). In our view, 302(b) does authorize in some instances requirements that land be restored so that impacts will be substantially unnoticeable. For example, where mining would irreparably damage values for which an "area of critical environmental concern" is designated, we submit that BLM is able to regulate strictly enough to protect the resource, even if that requires reshaping to the original contour or restoring to premining productivity. Indeed, such management would be required under the FLPMA mandate to give "priority" to ACEC's. Section 202(c)(3). In short, the "minimization" standard of 302(b) must be construed more strictly than the DES indicates if BLM is to be fully considering all reasonable alternatives.

Again, we look forward to submitting much more detailed comments on the proposed rules and regulatory analysis by July 16th. We also ask that these comments be printed in the FES.

Sincerely,

Debbie Sease
Friends of the Earth

Peter Kirby
The Wilderness Society

June Hall
National Wildlife Federation

United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO

L7617(135)

MAY 06 1980

Memorandum

To: Director, Bureau of Land Management

Through: Deputy Assistant Secretary for Fish and Wildlife and Parks MAY 7 1980

From: Acting Director, National Park Service

Subject: Review of Draft Environmental Impact Statement DES 80-5, Surface Management of Public Lands Under the U.S. Mining Laws

We have reviewed the draft environmental impact statement prepared by the Bureau of Land Management (BLM) on surface mining of public lands under the U.S. mining laws 43 CFR 3809 and we are pleased to provide the following comments.

33 The environmental analysis in the DEIS does not evaluate the proposed action and the alternatives in the light of other statutes and executive orders designed to protect the human environment. For instance, there is inadequate discussion of the effects that the proposed action and alternatives will have on the obligations of BLM under EO 11988 (Floodplain Management), EO 11990 (Wetland Protection), and EO 11593 (Protection and Enhancement of the Cultural Environment). Neither the relationship between the Clean Air Act Amendments of 1977/ prevention of significant deterioration regulations and the proposed action and its alternatives, nor the relationship between the proposed action and its alternatives and the Surface Mining Control and Reclamation Act of 1977 are adequately discussed.

34 The implications of surface management of private lands underlain by Federal mineral rights should be more fully addressed.

9 In developing environmental protection standards for natural resource values, the use of "practical economic impact...on the...proposed operations" (paragraph 6, page 9) as a basis for the standards would be wholly inappropriate, since they are environmental protection standards, not operation protection standards. The standards should be based on the value of the resources affected.

3

9 The idea of "due impairment" is vague, as is the reason why it may be necessary in the California Desert (page 11). These concepts should be further clarified. The text of page 15 is poorly written and difficult to understand. Phrases have apparently been omitted from paragraph 5. We do not agree with the statement that valleys, canyons and hillsides are "...excellent sites for waste storage." Very often, significant impacts on environmental resources and values may occur if topographic features are used for waste storage.

2

Adjacent Lands Administered by the National Park Service (NPS)

Neither a Plan of Operations nor a Notice of Intent would be required for certain limited operations. BLM would thus not become aware of operations exceeding the "minor improvements" criterion or taking place off "open use areas and trails" except by chance. If a notice of intent to enter on public lands (which may be adjacent to NPS lands) to conduct mining operations were required, the land manager would at least be able to check those operations where notice was legally filed.

The NPS should have the opportunity to be involved in setting bond amounts for exploration or mining and reclamation activities that may impact NPS units or study areas. The NPS should also be allowed to participate in inspections in cases where NPS units may be affected, especially when these inspections are in response to a petition or notification of violation or for release of performance bond.

The proposed action should provide for a petition process to allow agencies responsible for the protection of the resources on adjacent lands a means whereby BLM could be notified of permit violations or noncompliance with mining and reclamation plans.

The NPS should be given an opportunity to directly participate in developing criteria for designating lands unsuitable for mining of locatable mineral resources near NPS units or study areas. These criteria should be related to all resources and to the direct and indirect effects that may occur on fragile lands including buffer zones adequate to protect the resources of NPS units and study areas. The establishment of buffer zones around NPS lands must be consistent with NPS policy, especially when the scenic and environmental integrity of the park lands may be involved.

Section 3809.2-2 of the proposed regulations implies that destruction of survey monuments is permitted if the operator reports the destruction to the authorized officer after the fact. The destruction or removal of a U.S. Geological Survey benchmark is prohibited by law and offenders can be fined. It would seem a wiser procedure to locate survey monuments prior to mining operations in the plan of operations. The authorized officer could then bring this to the attention of the appropriate emplacing agency, or agency administering adjacent lands.

BLM should provide for consultation and coordination with the NPS Air Quality Office regarding necessary monitoring, analyses and data, where the proposed exploration or mining activities may have adverse impacts on air quality or air quality-related values of NPS units or study areas, or where visual resources seen from the park may be significantly altered. Lands administered by the Bureau are often a significant portion of a scenic vista that is seen from those of the National Park Service.

3812
BLM

UTAH INTERNATIONAL INC.

550 CALIFORNIA STREET - SAN FRANCISCO, CALIFORNIA 94104
CABLE ADDRESS: UTAHINTL - TELEX: 34-0310

15 July 1980

Director (520)
Bureau of Land Management
1800 C Street, N. W.
Washington, D. C. 20240

Dear Sir:

Utah International Inc. would like to submit these comments on the Draft Environmental Impact Statement (DEIS), "Surface Management of Public Lands Under the U. S. Mining Laws, 43 CFR 3809."

Utah International Inc. is a mining corporation with producing surface coal mines in Colorado and New Mexico, and interests in mining in other parts of the country. The following are our comments on the Draft EIS.

Editorial Clarity

Certain oversights and deficiencies in the text of the DEIS tend to impair confidence in the document's integrity. These include poor editing, unclear writing and the lack of a publication date. An example of poor editing which may have excluded pertinent information is located at the bottom of page 15: "Material that is relatively high grade headframe, a building used for..." The missing portion should be added in the Final EIS.

9 The meaning of the following statement on page 15 also is unclear: "Because of the rapid development, ore may be left unmined in some awkward spot extending back too deeply beneath waste." The meaning of the word "waste" as used in this context is not clear. The beginning of the sentence contains the phrase, "because of the rapid development." Rapid development is not previously mentioned. This statement should be clarified in the Final EIS.

The overall quality of the DEIS is reduced by the lack of editorial clarity and in some portions of the text it is even impossible to decipher the author's intended meaning. These errors should be corrected in the Final EIS.

Minerals Development

The description of the minerals industry in Chapter 2 is deficient in the quality and quantity of material provided. The text does not discuss the geologic environment. No mention is made of subject such as mining districts, mineral belts, or the types of deposits. The conduct of prospecting and exploration activities are directly linked to this information. The type of mineralization will determine the mining method selected. This information should be added to the Final EIS.

The minerals industry description contains several imprecise statements. One example is the description of the Block Caving method on page 15. The statement is made that the ore "... is mined from the bottom up rather than the top down" eliminating "... the need to remove the non-mineralized overburden." The nature of underground
9 mining is such that overburden removal is not relevant. The ore is not mined from the bottom up, rather, an undercut is made into the ore. The material above the undercut is blasted and allowed to cave into the undercut. Logically, the next undercut would be underneath the previous one allowing the cave to move under the force of gravity.

In the DEIS as well as the proposed regulations, 43 CFR 3809, mining operations are defined to include all activities connected with the prospecting, development, extraction and processing of a mineral deposit locatable under the Mining Law of 1872. In the Final EIS these activities should be defined independently because the environmental impacts of each activity differ substantially. For example, prospecting is temporary in nature distinguishing it from more committed development such as extraction or processing. To group these distinctly different activities into the single category of mining operations will be to invite a similar grouping in the regulatory response. Such a response would be inappropriate.

Regulatory Consolidation

Utah International Inc. recognizes the need for proper surface management of the public lands, however, the users of that land should not be inundated with excess regulations. We would suggest that the BLM develop their regulations in conjunction with other land managing agencies such as the United States Forest Service in order to maintain a continuity in land management and a minimum of regulations. Such a combination of ideas and practices would result in land management beneficial to the user as well as the environment.

We appreciate the opportunity to present our comments on the DEIS.

We hope that they provide the BLM with useful information to produce a Final EIS that is of value to public land users and managers.

Sincerely,

J. L. Walzer, Ph.D.
Director of Environmental Quality

JLB:cs

21 April 1980
Shelter Cove Star Route
Whitethorn, California
95489

Director (520)
Bureau of Land Management
Interior Building
18th and C Streets, N.W.
Washington, D.C. 20240

Sir:

Please consider the following comments on the Draft environmental Impact Statement, Surface Management of Public Lands under the U.S. Mining Laws, 43 CFR 3809 (hereafter: EIS).

1) Reference: Chapter 1: "Purpose" (p. 1): and the function of the entire EIS.

Comment: "This EIS is somewhat unique..."(p. 1) is an understatement. Because this EIS is unique in important ways a careful review of the "Purpose" is needed to forestall inappropriate precedents which would be established by this EIS. According to 40 CFR 1502.1, "the primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government." The purpose of the EIS, then, should be to pose the question, "Does the proposed action conform to the policies and goals set forth in Sec. 101 of NEPA?" Further, Congress has directed that the
35 policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in NEPA "to the fullest extent possible"(42 USC 4332). The purpose of the EIS is thus to determine whether the proposed regulations conform to the fullest extent possible to the policies and goals set forth in 42 USC 4331. This conclusion is the unavoidable and necessary result of considering the relevant basic legal authorities. If so, it follows that the treatment in the EIS must analyse whether the proposed regulations conform to the fullest extent possible to the NEPA policies and goals in their environmental impacts (Chapter 8), and analyse whether the alternatives also so comform (Chapter 6). Similarly, Chapter 4 must examine measures not included in the proposed action which could mitigate failures of the proposed regulations to conform to the fullest extent possible; and so forth.

It is readily apparent that this mandated approach is not followed throughout the EIS. By contrast, in the present EIS the effect is the denial of any question whether there are additions or modifications to the proposed regulations which would be better suited to the environment from the viewpoint of NEPA; in essence, there is no examination of the regulations by the light of NEPA, thus the primary purpose of an environmental impact report is not fulfilled. This stems from a flawed development

of the "Purpose"(p. 1). I thus request the Draft EIS be withdrawn and subjected to this major change of emphasis.

It should be noted that the proposed action in this case is not merely to issue regulations, but rather, to comply (at least in part), via the issuance of regulations, with certain legal mandates of FLPMA. It is the overall body of this compliance (in whole or in part) that is the official policy being adopted (cf. 40 CFR 1506.18 (b)(1)), and is the major federal action which is subject to the rigors of NEPA's policies and goals. The difference between this view and that expressed by the Draft EIS allows
9 in this case for the overview of the proposed regulations in the full light of NEPA. By contrast, the present EIS does not allow shortcomings of the proposed regulations to be seen for their environmental impacts in the light of NEPA. This is a very serious flaw.

Please consider this important and profound criticism of the EIS most carefully and seriously!

2) Reference: Chapter 1; Chapter 8: alternatives including
36 the proposed action.

Comment: The EIS fails to identify the agency's preferred alternative (authority: 40 CFR 1502.14(e)).

3) Reference: Chapter 1: "With minor exceptions...all of 43 CFR 3802 are included in 43 CFR 3809."(p. 6). "The proposed regulations, 43 CFR 3809, include all the provisions for Wilderness Study Areas (both potential and identified) which will be promulgated as 43 CFR 3802...."(p. 6). Chapter 8: "In essence the regulations provide a means to insure that mining operation impacts are consistent with the interim management requirements of Section 603(c)."(p. 40).

Comment: These statements are contrary to fact. The proposed regulations would exempt lands of less than 5000 acres which are not islands from the additional requirements (protections) applying to all other lands under wilderness review. Such exemption
37 does not exist under 43 CFR 3802. This difference is of significant impact to at least the identified wilderness resource of certain designated natural or primitive areas. It is clear that Congress intentionally reserved for itself the right to review for possible wilderness status these certain natural or primitive areas (authority: 43 USC 1782). That these reserved areas explicitly are to include landlocked areas of less than 5000 acres is clear from the list of such areas published by the Congress as part of the legislative history of the basic authority, FLPMA (authority: House Report No. 94-1163, page 18). The EIS thus wrongfully conveys the notion that no significant difference exists between the two sets of

regulations. Further, the EIS fails to examine the impact of this significant difference, and the EIS fails to convey that the proposed action in this case may usurp perogatives explicitly reserved by the Congress by causing the impairment of certain possible wilderness resources (cf. 40 CFR 1508.27(b)(10)).

4) Reference: Chapter 2.

Comment: There are a number of apparent misprints in the text that have caused some sections to be incoherent. The section on air quality (pp. 19, 21) seems especially affected. Circulate to all commenting parties a corrected version.

9

5) Reference: Chapter 2; Chapter 3.

Comment: The "minerals industry" is not an "environment" for the purposes of NEPA (authority: 40 CFR 1500.2 and 1508.14) and therefore is not to be so described in the EIS (authority: BLM Manual Section 1792.44E2a(?)). The EIS is seriously in error. However, much of the related information may be included for other reasons (authority: BLM Manual Sections 1792.44E2a(3) and 1792.44E5b(5)).

6) Reference: Chapter 2: "Minerals Industry" (pp. 15-19).

Comment: No discussion or mention is given of the considerable adverse impacts on human health by the minerals industry. These adverse impacts may occur widely in the industry, including in nickel, uranium, asbestos, and mercury mining, among others. These serious effects may include carcinogenic or otherwise toxic effects from leachates, tailings, or air-borne materials, and these effects may occur over wide surrounding geographic areas and/or over very long time spans, and may be associated with both extraction and processing. Adverse health effects may also be caused by such factors as an increase in public road use by ore trucks and mining equipment. The omission of such discussion from the EIS creates a misleading and unbalanced presentation.

18

7) Reference: Chapter 3.

Comment: No discussion is given of the environmental impact that the poorly drawn public availability of information section of the proposed regulations will have. Actions significantly protective of the environment can be and often are taken by public members whose effectiveness is severely affected by

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the availability of information. When information is not readily available locally, as via mailed photocopies not required by the proposed regulations, the huge size of many BLM Districts will preclude environmentally protective involvement by many public members remote from the office of the authorized officer. Such public involvement effectively discouraged by the proposed action may be of extremely important significance. The EIS fails to discuss or mention this impact, and does not propose a mitigating measure.

39

8) Reference: Chapter 8 (pp. 54,55).

Comment: Under "Alternative 1" and "Alternative 2" appears a discussion of the proposed action which establishes that if a plan of operation is unapproved after the time limit for BLM action has expired, that the operator may proceed at his own risk. Neither here nor elsewhere in the EIS is there mention that such regulation may lead to violation of an environmentally protective law (cf. 40 CFR 1508.27(b)(10)). Such violation would be by the Secretary of Interior, who will have failed to, "by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." (authority: 43 USC 1732(b)).

40

9) Reference: Chapter 8: "Alternative 3".

Comment: There is no mention in the EIS that this alternative cannot legally be substituted for immediate obligations to the existing mandates of FLPMA.

41

10) Reference: Chapter 8: "Alternative 3": "...to the point of making an entire operation uneconomic..." (p. 55).

Comment: The treatment in the EIS is misleading. Whether an entire operation becomes uneconomic as a result of the Secretary's effort to prevent unnecessary and undue degradation is not a rigid or ultimate criterion. It is possible to imagine situations in which a fully appropriate and legal result would be to render an entire operation uneconomic.

32a

11) Reference: Chapter 8: the many missing alternatives: also, Chapter 4.

Comment: Because the EIS fails to fulfill the primary purpose of an environmental impact statement, there is no examination of how the proposed regulations could be improved so as to better conform to the purposes and goals of NEPA, and thus reduce adverse impacts. Only one of the alternatives presented in Chapter 8 proposes a moderation of the proposed regulations; the others propose their replacement. Yet, it requires little expertise to recognize that there are many specific improvements possible in the proposed regulations, improvements which would be fully within the intent and mandates of FLPMA and in fact would enhance agreement with that authority, such that the agreement of the proposed action with the purposes and goals of NEPA would be considerably improved. I will be pleased to submit a list of specific improvements to the regulations if you so request; some such improvements are implicit elsewhere in this letter. Modifications and/or additions to the proposed regulations which improve them from the viewpoint of NEPA must be regarded as reasonable alternatives or appropriate mitigations. The EIS thus fails again (authority: 40 CFR 1502.14; 1502.16(b); BLM Manual Section 1792.44E8).

12) Reference: Chapter 3: indirect impacts of the proposed action.

Comment: If the agency persists in refusing to examine the proposed action in the light of NEPA as I have requested in comment #1 above, the proposed regulations should at least be examined for the impacts that will result indirectly by reason of their shortcomings. Such indirect impacts are clearly significant, and the Draft EIS fails to examine them.

15) Reference: entire EIS: tone.

42 Comment: The implication in the "Introduction" of Chapter 1, which is further implied by the treatment given the minerals industry throughout the EIS, is that the Bureau is particularly anxious to respond to and examine the concerns of the minerals industry. The overall tone of the EIS is not balanced and objective.

Thank you for your consideration of the above comments. Please send me a copy of the Final EIS and add my name to all mailing lists related to this topic.

Sincerely,

Robert Sutherland

Robert Sutherland.

9-21

BLM DEIS #80/5

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

APR 25 1980

Director
Bureau of Land Management
19th and E Streets, N. W.
Washington, D. C. 20240

Dear Sir:

This is in response to your March 4, 1980, letter in which you included for our review and comment the Draft Environmental Impact Statement on Surface Management of Public Lands Under the U. S. Mining Laws.

Although the NRC does not have authority over any actual mining activities, the Commission is responsible for regulating uranium milling and mill tailings disposal. As described in Chapter 2 of the subject EIS, these activities are included as steps of the mineral recovery and extraction processes covered by the proposed BLM regulations (43 CFR 3809). It is our understanding that issuance of a mill site claim associated with a mineral claim is essentially non-discretionary under the Mining Act of 1872. Further, it is assumed that a mill site claimant would be subject to the requirements contained in the proposed regulations to file a plan of operations and agree to reclaim all land disturbed.

Generally, NRC supports issuance of the regulations (43 CFR 3809) since, as described, the net effect of the action should be the reduction in adverse environmental impacts associated with mineral activities. The Commission published proposed regulations (44 FR 50015) on August 24, 1979, which govern the disposal of uranium mill tailings and establish requirements pertaining to operation and decommissioning of mill facilities and reclamation of mill tailings disposal sites. I have included a copy of these proposed regulations for your information.

If the "plan of operations" required to be filed under the BLM proposed regulations (43 CFR 3809) would have to address any mill site claims associated with a mineral claim, then we suggest that NRC's authorities and regulations be referenced for completeness. One specific provision of NRC's proposed regulations which may need to be discussed in the BLM environmental impact statement deals with land ownership of uranium mill tailings disposal sites. Ultimate long-term government land ownership of mill tailings disposal sites is required under the proposed NRC regulations as an added measure of institutional control. Authority for this requirement is contained in the Uranium Mill Tailings Radiation Control Act of 1978. Although some future use of the surface and/or subsurface estates at tailings disposal sites may be permitted, this requirement will likely result in the long-term commitment of such lands.

43

Received in BLM #0 202-B

1 May 1980

APR 25 1980

We appreciate the opportunity to review and comment on the draft environmental impact statement. If you have any questions concerning our comments, please contact K. Hamill of my staff at 427-4103.

Sincerely,

Ross A. Scarano, Chief
Uranium Recovery Licensing Branch
Division of Waste Management

Enclosure: NRC Proposed Regulations on Uranium Milling

Natural Resources Defense Council, Inc.
25 KEARNY STREET
SAN FRANCISCO, CALIFORNIA 94108
415 421-6561

Washington Office
1725 I STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20006
202 223-8210

New York Office
122 EAST 42ND STREET
NEW YORK, N.Y. 10017
212 949-0049

June 13, 1980

RECEIVED
JUN 17 1980

Frank Gregg, Director
Bureau of Land Management
1800 "C" Street, N.W.
Washington, D.C. 20240

RE: Draft Environmental Impact Statement/Surface Management of Public Lands Under the U.S. Mining Laws -- 43 C.F.R. 3809

Dear Mr. Gregg:

The Natural Resources Defense Council, Inc. (NRDC) has long been concerned about the environmental impacts associated with hard rock mining activities on the Public Lands. We have also been concerned about the failure of the Bureau of Land Management (BLM) to acknowledge the applicability of the National Environmental Policy Act of 1969 (NEPA) to its rulemaking activities generally. Accordingly, we were very pleased when the Bureau announced that an environmental impact statement (EIS) would be prepared in connection with its renewed rulemaking on hard rock mining. These comments deal with the draft EIS. We will submit detailed comments on the proposed regulations prior to the close of their comment period which we understand has been extended to July 16, 1980.

The draft EIS is extremely brief: it is only 63 pages long. While we support the Bureau's efforts to make its impact statements concise and to the point, we submit that the instant draft falls short of fulfilling the requirements of NEPA. Its discussion of environmental impacts addresses only the relative changes which would occur as the result of the proposed regulations and ignores adverse environmental impacts that are likely to occur as the result of their deficiencies. In addition, its

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treatment of alternatives is inadequate. At best, the draft merely demonstrates the obvious -- that the adverse environmental impacts of unregulated mining activities will exceed those of regulated mining. At worst, it masks the need for more effective regulations. In what follows, we discuss these deficiencies in greater detail.

The environmental analysis of the impacts resulting from the proposed regulations is presented in extremely general terms. The draft does not consider either the actual impacts of mining or those which will occur if the regulations are implemented. For example, the draft's analysis of impacts on soil merely states that:

> "Adherence to the proposed regulations should reduce soil loss and deterioration for all three levels of mining . . . . The net effect of these proposed regulations on soil conditions is expected to be positive." (p. 39.) 1/

As indicated above, such analyses simply demonstrate the obvious and do not reveal either the magnitude or type of impacts that will occur despite implementation of the proposed regulations. 45

Had the actual and residual impacts been assessed, the draft would have revealed that hardrock mining will continue to have significant widespread and localized adverse environmental impacts, notwithstanding implementation of the proposed regulations, particularly given their serious deficiencies. Even if such analyses were precluded by lack of available data,

1/ Unless otherwise indicated, all page references are to the draft EIS.

there is little, if any, excuse for the draft's failure to acknowledge and mitigate the adverse impacts that will result from particular provisions of the proposed regulations.

The most unique feature of the proposed regulations is found in § 3809.1, which places the burden of determining reclamation and environmental protection measures on BLM employees, rather than mining operators. This approach is diametrically opposed to the approach taken by the Forest Service and many of the western states, pp. 59-62, all of which require operators to submit reclamation plans. Even the mining regulations the Bureau proposed in 1976 contained this requirement.

Two principal reasons are advanced for the approach taken by the new regulations: (1) that requiring operators to submit reclamation plans would be an "unreasonable burden" on small operators who do not have the capacity to develop such measures; see, BLM, "Surface Management of Public Land Under U.S. Mining Laws; Proposed Procedure to Minimize Adverse Environmental Impacts, 45 Fed. Reg. 13956-13965; and (2) that requiring BLM employees to develop such plans will save the government and industry "considerable time and money . . . by reducing paperwork and time-consuming review." (p. 54.) 46 Neither the draft EIS nor any other document prepared by the Bureau in connection with this rulemaking provides any support for either of these assertions.

We doubt that either of the reasons advanced for adopting this approach could be supported. We understand that the experience of the Forest Service, which has required all operators to submit reclamation plans for the past six years, indicates that this requirement is not unduly burdensome as

well as that it produces distinct benefits, including helping miners view environmental planning and mitigation as costs of doing business. Moreover, given the significant increase in data collection and analysis which the proposed approach will require of agency employees, to say nothing of the abbreviated schedules for plan approval, we submit that the Bureau will have to increase its staff, which is already overtaxed, at increased costs, in order to fulfill this self-imposed obligation. See, e.g., Council on Environmental Quality, Hard Rock Mining on the Public Lands, p. 19 (1977). (Hereinafter referred to as the "CEQ Report".)

Even more importantly, we submit that the draft cannot simply assume that no environmental costs will occur as the result of a failing to require operators to develop reclamation plans. A recent report by the National Academy of Sciences stressed the necessity of integrating reclamation provisions into the plan of operations:

> "The need to integrate reclamation into the total mining operation is widely advocated, and planning for reclamation from the beginning of operations is generally accepted as being the only way to assure optimum results." National Academy of Sciences, Surface Mining of Non-Coal Minerals, p. 133 (1979) (emphasis added). (Hereinafter referred to as the "COSMAR Report.")

Thus, failing to require the operator, the person most familiar with the proposed operations, to consider reclamation from the outset is likely to lead to inadequate environmental protection as well as inefficient regulation.

The Bureau cannot ignore the environmental costs of its proposed approach. Nor can it ignore the fact that these costs

are, in fact, unnecessary and must be avoided, pursuant to § 302(b) of the Federal Land Policy and Management Act of 1976 (FLPMA), by requiring the operator to submit a reclamation plan. BLM employees can then review each submission and develop supplementary measures, if necessary, to protect the environment.

The proposed regulations also contain another unusual provision: although an approved plan of operations is required for mining activities which entail potentially significant and impairing disturbances of surface resources, § 3809.1-1, the regulations would allow such activities to proceed without express approval, if the authorized officer does not act on a plan within a specified period of time. § 3809.1-4(c). There is no guarantee that the officer will review a plan prior to the time impacts begin to occur. Moreover, there is no requirement that operations which begin in advance of formal approval will be monitored prior to the time at which unnecessary or undue degradation occurs.

While the regulations state that such on-going operations are technically not approved, we submit that it is indeed likely that adoption of this approach will produce widespread and significant adverse environmental impacts, given the
46 Bureau's chronic personnel problems and the vast acreages of Public Lands that are involved. See, e.g., CEQ Report, p. 19. Instead of acknowledging these facts and their implications, the draft attempts to minimize the impacts that will occur. See, p. 54. Moreover, instead of making any attempt to mitigate those impacts,[2] it simply dismisses them by

[2] At least two mitigating measures are available and will be discussed in our comments on the proposed regulations.

referring to the possibility that the regulations may not be uniformly enforced. (p. 47.)

The draft's treatment of the contents of required plans is also inadequate. The proposed regulations distinguish between "absolute" standards, such as established federal and state water quality standards which must be adhered to, and "non-absolute" standards, such as requirements for protection of fish and wildlife resources, which are "flexible" and will be developed pursuant to a standard of "reasonableness." (p. 9.) The degree to which these standards will, in fact, mitigate impacts associated with surface mining is not specifically addressed.

Thus, the draft ignores the limitations of the "absolute" standards where some serious impacts of mining, such as contamination of groundwater, are concerned. See, e.g., COSMAR Report, p. 133. It also ignores the fact that other serious impacts, such as fugitive dust and noise pollution, are not covered under either type of proposed standard. Finally,
47 although the draft suggests that the reasonableness standard means that mitigating measures will not be imposed if their "practical environmental impact" would be to make the proposed operation uneconomic," p. 9, it virtually ignores the fact that adoption of such a test would necessarily result in unnecessary and undue degradation of resources, regardless of their importance.

Similar problems exist with respect to the draft's treatment of both reclamation and road construction. With respect to the former, the draft contains numerous statements to the effect that, under the proposed regulations, reclamation of disturbed areas will be required, ensured and/or accomplished,

See, e.g., pp. 8, 9, 39, despite the fact that Chapter 2 reveals that reclamation will be "difficult" at best on vast areas of the Public Lands. Moreover, the draft wholly fails to acknowledge the fact that the proposed reclamation requirements for the great majority of the Public Lands are qualified by a "where feasible" standard which is wholly undefined. This
48 standard and Chapter 2 plainly suggest that reclamation generally and revegetation in particular will not be achieved on these lands under the proposed regulations. Similarly, the draft asserts that the proposed regulations will allow road construction only when existing roads are not adequate, p. 40, but ignores the fact that these regulations provide virtually unlimited discretion to the authorized officer regarding road construction.

Other deficiencies in the proposed regulations which the
9 draft ignores relate to the circumstances under which a plan can be modified, their failure to provide for bond forfeitures, and their failure to require a plan of operations in all cases where sensitive resources are involved, including potential or designated areas of environmental concern, designated natural areas, known critical wildlife habitat areas and riparian
49 areas. These deficiencies, like those discussed in greater detail above, clearly have the potential to cause unnecessary and undue degradation of the Public Lands. The Bureau is obligated to disclose such impacts, rather than ignore them or merely assume that any regulation is better than none.

As indicated, the draft's treatment of alternatives is also
50 inadequate. The consideration and discussion of alternatives has been termed the "linchpin of the entire impact statement." Monroe County Conservation Council v. Volpe, 472 F.2d 693,

697-98 (2d Cir. 1972). The importance of the alternatives section has been recognized not only by the courts, but also by Congress, 42 U.S.C. §§ 4332(C)(iii), 4332(2)(E), and by the Council on Environmental Quality (CEQ) in its "Regulations for Implementing the Procedural Requirements of the National Environmental Policy Act." 40 C.F.R. § 1502.14. The CEQ Regulations require agencies to "rigorously explore and objectively evaluate" alternatives. Id. § 1502.14. Both CEQ and the courts have prohibited impact statements in which the consideration of alternatives is little more than a pro forma exercise or post-hoc rationalization of decisions previously arrived at in the absence of any genuine NEPA analysis. Id. § 1502.2(g); see, NRDC v. Callaway, (CA 2) (524 F. 2d 79).

35 The draft's discussion of alternatives is only five pages
50 long. Most of the discussion is devoted to explanations of the differences between alternatives. The remainder consists largely of superficial excuses for those differences, unsupported conclusions of law and self-serving rationalizations. Thus, for example, while the draft concedes that a reclamation standard which was stricter than the proposed "where feasible" standard would have "less" impacts, it asserts that,

> "if it is practicable to impose the more stringent standards in certain circumstances (in areas which are most amenable to successful reclamation), then the impacts from the alternative and the proposed action may not differ substantially." (P. 56.)

Such statements blur, rather than "sharply defin[e] the issues" and fail to provide a "clear basis for choice among options by the decision-maker and the public." CEQ Regulations, § 1502.14. Moreover, whether intentionally or

inadvertently, they clearly undercut the efforts of many organizations and individuals to reform the Mining Law of 1972.

In sum, the draft EIS on hardrock mining suffers from serious deficiencies. The fact that it is "somewhat unique," p. 1, in no way excuses those deficiencies. Nor does the "short time period alloted to drafting" the document, p. 63, especially since internal evidence suggests that it was completed prior to October 22, 1979. See, e.g., P. 37. We sincerely hope that its deficiencies will be corrected in the final.

Very truly yours,

Johanna H. Wald /JT

JHW/jt

United States Department of Agriculture — Soil Conservation Service — P.O. Box 2890, Washington, D.C. 20013

S/O

Mr. Frank Gregg
Director, Bureau of Land Management
Interior Building
18th and C Streets, N.W.
Washington, D.C. 20240

APR 3 0 1980

Dear Mr. Frank:

The Draft Environmental Impact Statement on Surface Management of Public Lands Under the U.S. Mining Laws (42 CFR 3809) has been reviewed by the Soil Conservation Service and we offer our comments for your consideration.

33 We feel that overall the statement has been drafted in an excellent manner. In general the discussion of environmental impacts is well stated. An exception is in the area of prime farmlands, wetlands, and floodplains. We are of the opinion that the document should address these areas in keeping with the need to minimize impacts on these resources.

44 It is our opinion that the discussion of the proposed action and the comparison of the proposed action with alternatives could be strengthened in terms of reclamation requirements. Under the proposed action the mining operator may or may not submit a reclamation plan. We feel the reclamation standards for Federal lands should be consistent with Title V of Public Law 95-87.

34 The paragraph regarding Historical Background on page 3 could be expanded to discuss the differences between federally owned surface and privately owned surface. This might require an additional section.

We suggest the first sentence of Chapter 6 (page 49) be reworded to indicate that mining for some minerals such as coal may be a short-term land use. An additional sentence could be added that would deal with longer term land use considerations of other minerals.

It is our understanding that several States have enacted legislation in recent months to provide for a State program that will meet the requirements of Public Law 95-87. We suggest that the information on pages 59-62 be updated prior to publication of the final environmental impact statement.

Sincerely,

Acting For
NORMAN A. BERG
Administrator

cc:
Barry Flamm, Director, Office of Environmental Quality, SEC

COMMENTS OF THE

ENVIRONMENTAL DEFENSE FUND

ON THE BUREAU OF LAND MANAGEMENT'S

DRAFT ENVIRONMENTAL IMPACT STATEMENT:

"Surface Management of Public Lands

Under the U.S. Mining Laws"

July 14, 1980

By: Paula C. Phillips, Esq.

Environmental Defense Fund, 1657 Pennsylvania Street, Denver, CO 80203 (303) 831-7559
OFFICES IN: NEW YORK, NY (NATIONAL HEADQUARTERS); WASHINGTON, DC; BERKELEY, CA; DENVER, CO

The Bureau of Land Management's Draft Environmental Impact Statement on "Surface Management of Public Lands Under the U.S. Mining Laws" is in our view totally inadequate to meet the requirements of the National Environmental Policy Act or CEQ or Departmental implementing regulations, and should be completely redone and reissued in draft form.

We do not here engege in an exhaustive, section by section critique, but instead address some of the most significant areas of inadequacy and certain of the major legal and policy issues raised by BLM's approach to regulation of the hard rock mining industry. The Environmental Defense Fund has submitted detailed comments on the proposed regulations that this DEIS addresses. We attach and incorporate those more detailed comments here, as they address both the proposed action and the DEIS.

At the outset, BLM demonstrates a disturbingly cavalier attitude toward the concerns of the public over impacts of hard rock mining activities:

> From the concerns expressed by citizens, one could judge that any development work on a single mining claim is significant. These may be overstated.

38 (DEIS 3, emphasis in original) The DEIS reflects this attitude throughout. Its minimization of some mining impacts and failure to address others--for example, the almost total absence of any assessment of potential public health problems--and its sweeping generalizations in all cases render the DEIS virtually useless as a tool for informing the decisionmakers, other agencies, Congress, and the public of the potential impacts of the proposed action and reasonable alternatives thereto.

This is particularly evident in the discussion of the existing natural environment (as opposed to the industry "environment" to which much of the DEIS is devoted). For example, the reader learns that "[m]ining operations . . . may create significant impacts upon the air quality over public lands" (at 21); "mining operations on public lands have a variable impact on surface and groundwater quality and quantity, depending on the nature of the disturbance and local site, hydrologic, and climatic conditions" (id.); soils "can be viewed only in the broadest sense . . ." (at 22).

Clearly, generalizations are to a certain extent unavoidable in an EIS that attempts to "assess" the existing environment (and the potential impacts thereon) in 19 states reaching from Alaska to Florida. Equally clearly, however, such generalizations cannot begin to meet the agency's NEPA obligations with respect to specific proposals for major federal actions significantly affecting the quality of the human environment. Nor can a 30-day environmental "assessment" with no public participation meet those obligations. Nonetheless, an examination of the DEIS and the proposed regulations indicates that BLM intends to base its future NEPA compliance on these much too hastily prepared assessments from which the public will be excluded and which lack most if not all of the procedural safeguards required by § 102(2)(C) of NEPA for the environmental impact statement process. Such a course of conduct would clearly violate NEPA and implementing regulations in any

situation where an operator's proposal may have significant environmental impacts. Both the DEIS and the regulations should recog-

52 nize and acknowledge that whenever a proposal threatens significant impacts, the law requires preparation of an EIS.

The DEIS would be much more useful if it contained specific references to and discussion of the provisions of the proposed regulations that are designed to ameliorate the environmental impacts of mining operations that are identified, and those impacts that the regulations will not remedy. The DEIS does not adequately disclose this information. For example, the DEIS admits at numer-

28 ous points that impacts of mining operations on patented land will extend to the public lands, yet we find nowhere any discussion of the failure to regulate these impacts. (See below.) Also, in addressing reclamation, the DEIS contains assertions like: "reclamation procedures required . . . will revegetate much of the disturbed . . . soils" (at 39); and the assurance that unique botanical communities will be protected (id.). Yet there is no reference to the specific provision which, it is felt, will achieve these results and indeed we find no such assurance in the proposed regulations. As they are drafted, the regulations will not require any

32a reclamation at all if such measures are deemed by the authorized officer to be uneconomical for the individual operator involved. There are numerous other examples of the DEIS assuring the reader that certain environmental protection measures will be required, (e.g., at 39-41), for which we find no support in the regulations. Since this DEIS is intended specifically to address the proposed

regulations, there should be a much more thorough and open analysis of the specific provisions at issue, with references to those provisions.

The DEIS's assertion that the impacts of "well regulated" mining upon the environment and upon other resources and uses of the public land "are expected to be insignificant" (at 47) is absolutely unsupportable. A hard rock mining operation occupying several thousand acres of public land and, e.g., dismantling a mountain to extract ore constituting less than .5% of the material mined while filling surrounding valleys with slime pits--all of which will be permitted even with a "well regulated" industry--will most definitely have significant impacts on other resources and uses even if, theoretically, the environmental impacts could

9 be controlled.

In addition, BLM cites no authority for the conclusion that the public land impacts of mining on patented land "cannot be avoided." (DEIS 47; accord, e.g., p. 51) Section 302(b) of the Federal Land Policy and Management Act provides no exemption for such operators. It directs the Secretary to protect the public lands, by "any action necessary," from "unnecessary or undue degradation." By what authority has BLM created this exemption? It would appear that the agency has determined that the right of the public to protect its land from degradation by adjoining landowners is significantly less than the right of a private landowner in similar circumstances. We are unaware of any basis for this conclusion, and indeed § 302(b) would seem to dictate a contrary conclusion.

The discussion of alternatives (a total of 5 pages) is completely inadequate to provide any reasonable basis for comparison. The most egregious example, in our view, is Alternative 3, which raises serious legal and policy questions regarding BLM's regulatory effort. BLM's administrative amendment of § 302(b) is without legal foundation. Where in that provision is there an exemption from environmental regulations that are "expensive"? BLM's extremely strained interpretation of "unnecessary" and its disregard of the "or undue" language of § 302(b) is discussed in more detail in the specific comments below. Moreover, what authority does BLM have for imposing different regulations on different operators based upon each company's profit margin? The legal vulnerability of this approach is also addressed below.

53

32a

What legislative language would BLM suggest that would "give more authority to the Secretary . . . to impose stringent environmental standards on mining operations" (DEIS 55) than language that expressly amends the 1872 Mining Law and specifically directs the Secretary to "take any action necessary to prevent unnecessary or undue degradation of the lands"?

43

There is a considerable gap between the approach of these proposed regulations and the "alternative" suggested in the DEIS of requiring "prevention of any and all impacts." (at 55) The obligations imposed on the Secretary by § 302(b) do not require the impossible, but they clearly require much more than this proposal offers.

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF MINERAL RESOURCES

Richard H. Weisbach, Director
John Hess, Administrator

Capitol Complex
201 South Fall Street
Carson City, Nevada 89710

Address Reply to:
Capitol Complex
Mac Bldg., 201 S. Fall Street
Carson City, Nevada 89710
Telephone (702) 885-4362

June 12, 1980

To: Peter G. Morros

From: Joyce Hall

Subject: SAI NV 80100054 - Surface Management of Public Lands Under the U.S. Mining Laws, 43 CFR 3809

These comments pertaining to the draft environmental impact statement (DEIS) are intended as an addendum to the earlier comments which addressed only the proposed regulations. Reference is made throughout to the Regulations (40 CFR Parts 1500-1508) for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA).

In general, the DEIS fails to address several areas it must discuss in order to comply with NEPA and its regulations.

For example, 40 CFR 1500.1(b) requires that "information must be of high quality", and 1500.2(b) states that "environmental impact statements ...shall be supported by evidence that agencies have made the necessary environmental analyses".

Much of the data presented in the DEIS is outdated and inaccurate. For example, Table I-1, Public Lands by State, 1975 is drawn from the Bureau of Land Management publication Public Land Statistics, 1976. The 1977 version has been in print for quite some time and figures for 1978 will soon be published. Statistics for 1979 are available for individual states (see attached).

-1-

Table 2-1, Major Locatable Mineral Production by State, 1973 and 1974 is taken from the U.S. Bureau of Mines Minerals Yearbook, Volume II, 1974. Production figures for 1979 are available from the Bureau for individual states (see attached). Additionally, the chart is incomplete. For example, it shows no mercury production for Nevada, which in fact Nevada is the country's largest producer of mercury. No molybdenum output is listed for Colorado, Arizona or New Mexico, the country's three largest producers of the metal. "Molybdenum ranks first among metals produced in Colorado.

11

The DEIS reports that an accurate count of all unpatented mining claims is unavailable, when, in fact, claim owners are required by FLPMA to have recorded all claims with BLM by October 22, 1979.

Peter G. Morros
June 12, 1980
Page 2.

40 CFR 1502.16 stipulates that which must be addressed in the section of an EIS which deals with environmental consequences. The section "shall include discussions of (e) Energy requirements and conservation potential of various alternatives and mitigation measures..." and "natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures."

35

The DEIS fails to evaluate either of these two areas. More specifically, while it is obvious that the reclamation provisions of the proposed regulations will be energy-intensive, no attempt has been made to estimate the cost of the proposal in terms of energy expenditures.

It is clear that the costs incurred in transporting material in a reclamation program will be equivalent to costs incurred during the original ore hauling operations. The U.S. Bureau of Mines has published a report untitled Capital and Operating Cost Estimating System Handbook which can be used to calculate the energy and other costs which would occur in a reclamation program. For example, in a surface mining operation which transports 100,000 mtpd of material, total equipment operation costs at 1975 prices would equal approximately $12,000 per day, of which about 15%, or $4,200 would be attributable to fuel costs alone. That fuel, at 1977 prices, would have cost $4,998.

51

The DEIS, to comply with 1502.16(e)&(f) should include an evaluation of the waste of depletable resources which would result from the reclamation requirements of the proposed regualtions. For example, the proposed regulations require that reclamation proceed as contemporaneously as possible with mining. Should this occur, resources which are subeconomic at current prices will be rendered inaccessible for mining in the future when higher prices or improved technology might have resulted in their reclassification as ore.

In addition, the higher mining costs which will accompany implementation of this proposal will require that operators mine ore of higher grades. This will effectively waste the lower grade material which could have been mined under more reasonable regulations.

35

NEPA (section 102(2)(C)(v)) requires that an EIS must contain a detailed statement on "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." The foregoing discussion is applicable in this case also.

40 CFR 1501.7 requires that a federal agency file a notice of intent in the Federal Register "as soon as practicable after its decision to prepare an environmental impact statement..." This section also mandates a "scoping" process during which the agency shall "invite the participation of affected Federal, State and local

Peter G. Morros
June 12, 1980
Page 3.

agencies..." to "determine the scope and the significant issues to be analyzed in depth in the environmental impact statement."

BLM by its own admission has complied with neither of the above regulatory requirements.

The DEIS is so replete with examples of inaccurate and incomplete data as to preclude a meaningful interpretation of the document. It would appear, that BLM must take appropriate action to comply with 40 CFR 1502.9(a), i.e., "If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion."

Draft

United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
WASHINGTON, D.C. 20240

MAY 08 1980

Memorandum

To: Office of Environmental Project Review

From: Assistant Director, Technical Services and Research

Subject: OSM Review of BLM's Draft Environmental Impact Statement on the Surface Management of Public Lands under the U.S. Mining Laws, 43 CFR 3809

The Office of Surface Mining has reviewed the subject document and finds that the draft document does not mention P.L. 95-87, the Surface Mining Control and Reclamation Act (SMCRA). In particular, the analysis of the draft document
54 neglects the possibility that options for environmental controls over mining of locatable minerals may arise as a result of the studies mandated by Section 709 of SMCRA. We would recommend that this possibility be considered in the preparation of the final document.

UNION CARBIDE CORPORATION
METALS DIVISION
270 PARK AVENUE, NEW YORK, N.Y. 10017

B. T. HONK
VICE PRESIDENT
EXPLORATION AND RESOURCE DEVELOPMENT

May 6, 1980

The Director
Bureau of Land Management
1800 C Street, N.W.,
Washington, D.C. 20240

re: Draft Environmental Impact Statement
Relating to Draft Regulations for
Surface Mining of Public Lands (Part 3800)

Dear Sir:

Union Carbide has commented separately on the Bureau of Land Management's Proposed
9 Regulations for Surface Mining of Public Land. We appreciate the opportunity to
2 comment on the Draft Environmental Impact Statement relating to those regulations.
However, we find this draft Environmental Impact statement unequivocally biased
against mining as one of the appropriate uses of public land, and contrary to BLM's
21 charter to foster multi-purpose uses of public land.

This attitude of the authors of this draft is best demonstrated by the map on page 23, where lands are classified for reclamation purposes as either "extremely
11 difficult" or "difficult." To these authors, nothing appears to be easy about mining. It seems clear that mining experts had no meaningful voice in the development of the draft, since at least this would have shown that there are positive and beneficial features to mining use of public land.

We do not consider the draft Environmental Impact Statement acceptable as written, and propose that it be totally redone to present a balanced description of the advantages and disadvantages of mining use -- taking all environmental aspects into account while recognizing the rights of the mining industry and the general public to enjoy the benefits of a healthy public lands-based industry. In these circumstances we believe a detailed criticism of the draft would serve no useful purpose.

Sincerely,

STATE OF UTAH
SCOTT M. MATHESON
GOVERNOR
OFFICE OF THE GOVERNOR
SALT LAKE CITY
84114

June 12, 1980

The Honorable Cecil D. Andrus
Secretary, Department of Interior
Interior Building
Washington, D.C. 20240

Dear Cece:

On behalf of the State of Utah, I urge you to adopt the "no action" alternative to the Draft EIS prepared by your staff concerning surface management of the public lands under 43 C.F.P. 3809. The "no action" alternative will allow the State of Utah to regulate hardrock mining and reclamation activities on private, state, and federal lands pursuant to the Utah Mined Land Reclamation Act of 1975 (Utah Code Annotated 49-8-1 et.seq). This State Act, in combination with other state and federal environmental laws, is more than adequate to prevent "undue and unnecessary" degradation of public lands and to maintain "non-impairment" of areas currently under wilderness review.

The State has three primary concerns with respect to implementation of the proposed surface management regulations. First, the Department of Interior
55 lacks express statutory authority to either implement detailed surface management regulations or to pre-empt State laws which presently control such activities on public lands. Neither the Mining Law of 1872 nor the Federal Land Policy and Management Act of 1976 authorize the detailed regulatory scheme proposed. (See attached comments to 40 C.F.R. 3809.0-3.) The
56 lack of such authority is vividly demonstrated by the fact that Congress found it necessary to enact a comprehensive surface mining law, the Surface Mining Control and Reclamation Act of 1977 (SMCRA)(P.L. 95-87) to control coal mining and reclamation activities.

Second, the State is concerned about the inadequacy of joint federal/state
24 cooperative agreements to avoid pre-emption of existing state laws and/or duplication in administration and enforcement of mined land reclamation standards. (See comments to 40 C.F.R. 3809.3-1.) The proposed regulations purportedly enable the Secretary to enter into cooperative agreements with a state after he has determined that that state's reclamation laws are as stringent as those

continued in the proposed regulations. However, similar arrangements under SMCRA have proven ineffective. Under SMCRA, even after the Secretary determined that Utah's reclamation law provided adequate protection, the joint federal/state cooperative agreement failed to prevent duplication in inspection and enforcement. These unsettled state and federal relations occurred despite the fact that detailed criteria were established concerning the stringency of state laws and despite the fact that SMCRA provided for federal funding for state inspection and enforcement on federal lands. Viewing this past experience, I have grave doubts about the effectiveness of a cooperative agreement established pursuant to the proposed regulations since those regulations are even less specific than SMCRA concerning what criteria will be applied to determine the adequacy of state reclamation laws. In addition, the proposed regulations also make no mention of federal funding for state activities on federal lands. Therefore, the opportunity for conflict, rather than cooperation with respect to the regulation of reclamation activities on federal lands, seems to be even greater under the proposed BLM regulations than under the present SMCRA program.

The third concern of the State stems from the substitute of BLM discretion in
54 place of adequate regulatory standards. (See comments to 40 C.F.R. 3809.0-5(n).) While discretion is necessary to address the significant differences between types of mineral deposits, the variety of mining techniques and the diversity of environments on the public lands, such discretion must be guided by criteria and standards. If such standards cannot be devised by federal regulators, it would seem appropriate that state and local governments more familiar with the diversity of mining environments within their boundaries should be allowed to continue present mining and reclamation controls. This conclusion is supported by the recommendations of the recent report of the National Academy of Sciences, Committee on Surface Mining and Reclamation on Surface Mining of Non-Coal Minerals (Chapter 6: "Alternative Institutional Approaches for Surface Mining Control and Reclamation").

In conclusion, the State of Utah feels that "no action" is the only appropriate alternative for you to support with respect to the proposed regulations. Until such time as Congress itself proposes a specific statutory program for the control and reclamation of the hardrock mining industry in this nation, the BLM is without authority to take the action which it proposes. The public lands are presently adequately protected by federal and state requirements including air and water quality standards, solid waste management requirements, and existing public land laws. As Congress recognized in Section 101(f) of the Surface Mining Control and Reclamation Act, "because of the diversity in terrain, climate, biologic, chemical, and other physical conditions in areas subject to mining operations, the primary governmental responsibility for developing, authorizing, issuing, and enforcing regulations for surface mining and reclamation operations, subject to this Act should rest with the States". The Bureau of Land Management should accept this statement applicable to coal lands under SMCRA as being true of the hardrock mining industry and should leave regulation of such operations to the states.

I hope that these comments, and the attached analysis of the proposed regulations will be useful in determing further Interior action on this proposal.

Sincerely,

Governor

SMM/km

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

MAY 21 1980

Mr. Frank Gregg
Director (520)
Bureau of Land Management
Department of the Interior
19th and E Streets NW.
Washington, D.C. 20240

Dear Mr. Gregg:

The Advisory Council on Historic Preservation has reviewed the draft environmental impact statement on the surface management of public lands under the U.S. Mining Laws. As the Federal agency charged with coordinating the activities of the Federal Government as they relate to historic preservation, the Council has the following comment to offer.

The regulations proposed as alternatives contain varying references to agency responsibilities under Section 106 of the National Historic Preservation Act (NHPA), some of which are adequate and some of which are not.

57 1. Appendix I, BLM regulations, Part 3800--Section 3809.1-4, Plan Approval, contains adequate reference to responsibilties under the NHPA. Section 3809.2-2, Requirements for Environmental Protection, does not list protection of historic, cultural, and archeological resources as contemplated by the NHPA; however, it would seem appropriate to include these resources in this list. Subsection (f) does require operators not to knowingly disturb historic, archeological, or cultural sites, and gives BLM 10 days to determine what action should be taken with respect to sites discovered in the course of operations. This section should be rendered consistent with the requirements of the Archeological and Historic Preservation Act of 1974, which requires that the Secretary of the Interior be afforded 60 days within which to determine whether salvage measures are appropriate for sites threatened with irreparable damage by federally licensed activities.

2. Appendix II, Forest Service regulations, Part 252--Section 252.8, Requirements for Environmental Protection, should include historic and archeological sites protected under the NHPA as one of the enumerated resources.

In addition, a section should be added requiring that the comments of the Council be obtained pursuant to 36 CFR Part 800.

3. Appendix III, BLM regulations Part 3809--Section 3800.2-4(e) contains adequate reference to Section 106 of the NHPA. Section 3809.3-2(f), however, is not in conformance with the Historic Archeological Preservation Act, and should be amended.

4. Appendix IV, BLM regulations, Part 3802--Section 3802.3-2(f) is similarly not in conformance with the Historic Archeological Preservation Act and should be amended.

If the Council can be of further assistance in implementing this comment, please contact Mr. Peter Smith at 254-3886.

Sincerely,

Thomas F. King
Director, Office of Cultural
Resource Preservation

Responses

1. We do not agree that the Mining and Minerals Policy Act of 1970 may conflict with the 3809 regulations. (See Appendices V and I.) We feel that the 4th Section of the Act provides continuity with the regulations in terms of reclamation.

2. The narrative has been revised in Chapter 2 under "Minerals Industry" to reflect your concerns.

3. The statement to which you refer has been deleted.

3a. There is authority with respect to animals in the Endangered Species Act.

4. The discussion in Chapter 3 on the socio-economic impacts of the regulations on the mining industry has been revised. Coupled with the narrative contained in the regulatory analysis, a separate document, we believe meaningful text has been added to acknowledge these impacts.

5. Section 603(c) does amend the Mining Law to prevent impairment of wilderness. Section 302(b) is the general statement which mentions the 603(c) statement.

6. This is consistent with the solicitor's opinion of September 5, 1978 regarding impairment.

7. The new regulations will reflect that the areas be reclaimed where feasible in a reasonable manner.

7a. The DEIS presented its worst case analysis by stating what may happen to the small miner on page 38, column 1.

8. A notice of availability of the draft Regulatory Analysis was printed June 17, 1980 in the Federal Register. This document addresses the economic impacts to the government and the mining industry, and has been referenced in the FEIS.

9. Necessary revisions have been made.

10. A sixth alternative has been included in the EIS to allow most exploration activities and some extraction activities to take place without the plan approval process. The emphasis is on reasonable reclamation of disturbed sites rather than on complete control by BLM.

11. All data and tables have been updated and revised for the final EIS.

12. The narrative in Chapter 3 has been revised. There is a cause-effect relationship that must be considered here. The proposed mining regulations do not directly impact the environment, but place certain restrictions upon the causal agents, the operators, prospectors, exploration personnel, and all those agents that would disturb the ground. In this regard, all discussion of mining operations on the physical environment is relevant. Unregulated mining activities have caused unnecessary or undue degradation on the public lands in the past, which have led to some significant adverse impacts on the existing environment. The proposed regulations are designed to minimize occurrence of future abuses. This would lead to beneficial impacts to the natural environment. An equally relevant discussion is how seriously the proposed regulations may impact the minerals industry.

13. The comment suggests that §201(a) of FLPMA is a limitation of the Secretary's authority to draft either the 3809 proposed regulations or the 3802 regulations. Section 201(a) states that the inventory mandated "shall not, of itself, change or prevent change" in the management or use of public lands. Any change in the management of public lands comes from inter alia, the directives in Section 302(b), 601 (f), FLPMA and Section 603 of FLPMA. Section 201(a), by its terms, does not prevent such a change. Section 701(a) states that existing land use authorizations as of the date of FLPMA, are not terminated by the Act. This is not to say that such authorizations may not be terminated for failure to comply with duly promulgated regulations pursuant to authority vested in the Secretary by FLPMA and other statutes, and in accordance with accepted standards of due process. The commenter, however, misunderstands the intent of the proposed regulations and the effect of failure to comply with those regulations if adopted. Failure to comply with the requisites of the proposed regulations or the final interim regulations does not invalidate, forfeit or deem abandoned any mining claims. They do not, therefore, terminate the possessory interest which a claimant may have under the mining laws. Although not mentioned in this comment BLM also recognizes valid existing rights under Section 701(h) of FLPMA.

14. The comment recognizes that the rights granted under the United States mining laws have been circumscribed by FLPMA. The questions of whether or not the proposed regulations are reasonable or whether or not they exceed the authority granted the Secretary in FLPMA to manage activities on mining claims (assuming that FLPMA constitutes the sole source of that authority) will be considered in the adoption of final rules. This document addresses the environmental

impacts of the proposed rules. Legal analysis is part of the function of the notice and comment procedures pursuant to the Administrative Procedures Act. (See Section 310 of FLPMA 43 U.S.C. §1740.)

15. Our estimates of the number of plans of operation may in fact be too low. We will reconsider these estimates in the regulatory analysis. The number of plans will depend on the level of activity requiring a plan of operations.

16. See Table 2-2 and associated narrative in Chapter 2.

17. Certainly normal land use conflicts associated with multiple use management would not be the basis for refusing to approve a mining plan. However, in certain instances where there is an absolute prohibition of certain activities (i.e., activities resulting in the taking of an endangered species or the destruction of critical habitat, see 16 U.S.C. § 1782), the Secretary may not approve a mining plan unless, or until, modified to avoid the prohibited impact.

17a. This has been revised. See Introduction, Chapter 1.

18. The prohibition by the Secretary of assessment work which would impair an area's suitability for preservation as wilderness would constitute a "legal impediment" under 30 U.S.C. § 28b since a claimant's right to enter upon the claim has been obstructed. Cf. Richard L. Seltzer, 8 IBLA 105 (1972); in that physical access for the performance of assessment work is interdicted. Cf. Oliver Reese, 34 IBLA 103 (1978) Other revisions concerning deferment of assessment work have been made in Chapter 1.

18a. Hazardous waste from uranium mill tailings was used as an example.

19. Refer to Table 1-1.

19a. The intent of the regulations is to prevent unnecessary or undue degradation of all public lands administered by the BLM.

20. The statement "mostly rodents" does not exclude other species such as those mentioned in the following sentence.

21. Revisions have been made. Refer to Chapter 3, "Minerals Industry".

21a. The authorized officer has the discretion to allow these areas to remain.

22. The narrative has been changed to more accurately reflect conditions as they are, both in the mineral industry and natural environment. The regulatory analysis, released as a separate document for public review, has attempted to analyze economic impact. However, due to

the extremely diverse nature of all mining activities, it is difficult to precisely quantify the increased costs to mineral production as a result of regulation.

22a. A determination of a valuable mineral deposit is the "prudent man" test, as set forth in Castle v. Womble, 19 L.D. 455. The determination of current marketability has been accepted as a complement to that test.

22b. We agree with your comments that the last step in exploration or mining is the reclamation phase.

23. Your comment is well taken and revisions have been made in Chapter 1 to present a more complete picture of additional regulations pertinent to mining activities.

24. The BLM recognizes that most States have reclamation laws; however, they vary greatly in stringency (and minerals affected) and the State governments themselves vary in capability to implement, monitor, and enforce these laws. Where the individual State and its laws are comparable or more stringent than BLM's proposed final rulemaking, it is BLM's present intent that mechanisms be established so that compliance with the State law will satisfy the final regulations.

25. The "no action" alternative means that the BLM would reject the proposed action and all other alternatives offered as stated in this EIS. The "no action" alternative is required by CEQ regulations for all Environmental Impact Statements.

26. The department will direct the authorized officer to treat each operator fairly and consistently for activities conducted under the 1872 Mining Laws. Reasonableness by the authorized officer is the key in making the regulations work.

27. The impacts of existing mining activities on each resource is discussed in Chapter 2 under Natural Environment. A discussion of your concerns relative to groundwater is found there.

28. Neither the DEIS nor the proposed regulations discuss mitigating measures relating to mining activities. Specific mitigating measures will be applied after submission of a plan of operation.

29. There are conflicting reports as to the importance of the small miner in modern times. However, as long as there remains an 1872 Mining Law, the small miner continues to enjoy the statutory right that the large companies enjoy. These rights have not been altered by any Section of FLPMA. The possibility of delays in mineral discoveries and other impacts on the mining industry resulting from

decreased activity by the small miner must be recognized regardless of their scope.

30. The discussion on impacts to animals in Chapter 3 discusses the impacts as a result of the proposed regulations, not existing impacts from mining activities. A more thorough discussion of the impacts to animals resulting from mining activities is presented in Chapter 2.

30a. This particular aspect of the regulations is intended to assist the small miner and not the larger companies which usually have their own environmental staff.

31. Some of the difficulties in preparing the EIS and Regulatory Analysis are lack of substantive data pertaining to the number of claims recorded prior to implementation of the proposed rulemaking, the number of plans to be received, the size of operations, the scope of the plans of operations, as well as future administrative budgeting and manpower. We have made estimates, but consider them inadequate as a basis for comparison with Forest Service estimations.

32. FLPMA does not amend the Mining Law to prevent irreparable damage to areas of critical environmental concern. The wording in the proposed regulation is erroneous and will be changed.

32a. The wording in FLPMA gives BLM flexibility to impose regulations in varying degrees to prevent unnecessary or undue degradation. However, the BLM is bound by provisions in 43 CFR 14 to consider economic impacts of regulations on segments of the economy to achieve regulatory goals with minimum economic burdens. BLM may deny an operation if it will cause unnecessary or undue degradation regardless of the economics involved.

33. Appropriate acknowledgement of Federal and State laws pertaining to mining activities has been made in Chapter 1. Considering the numerous Federal, State and local laws which govern land disturbances (not always specifically related to mining activities) it was felt that a discussion of each was not necessary. Whether or not the 43 CFR 3809 Regulations become final, all operators must comply with all applicable Federal and State laws.

34. The revised regulations will exclude private land with federally reserved minerals. This issue had not been resolved when the EIS draft was printed. We feel that the existing procedures to resolve conflicts between the miner and surface owner are adequate.

34a. Applicable laws do not authorize denial of mining activities because of unavoidable impacts. See the revised Cultural Resources Section in Chapters 2 and 3.

34b. The regulations focus primarily on these specific areas as prescribed by Sections 601 and 603 of FLPMA. However, the others that you mentioned will also receive special consideration.

34c. Specific impacts will be mitigated in the plan approval process. See preferred alternative - Chapter 8.

34d. When a plan of operations is submitted, BLM will, to the extent possible, comply with Section 106 of the National Historic Preservation Act. The Wild and Scenic Rivers Act has been mentioned in Chapter 1.

35. The proposed regulations were initiated and the DEIS substantially completed prior to the effective date of the new CEQ regulations concerning Environmental Impact Statements.

36. The final EIS identifies a preferred alternative.

37. The management authority in Sec. 603 of FLPMA does not apply to mining in WSA areas less than 5000 acres. See the Interim Management Policy Guidelines, Page 27 ¶ H, dated December 12, 1979.

38. Most of these impacts have been discussed in the Natural Environment in Chapters 2 and 3, but not under the title of Adverse Effects to Human Health. While we agree with your concerns, tests relating impacts to human health as a result of mining activities to date, nationwide, have been inconclusive.

39. Logistically, the BLM would be unable to notify the concerned public of every plan of operation. The authorized officer does have the discretion to call public meetings to discuss mining proposals.

40. Although the operator may be allowed to continue under an unapproved plan, he must still comply with all other laws and regulations. The authorized officer may invoke stipulations to mitigate unnecessary or undue degradation at any time. The operation will be monitored.

41. We do not intend to delay living up to our responsibilities under Section 302 (b) of FLPMA, while proposed legislation is being considered.

42. The narrative has been changed to more accurately reflect conditions as they are, both in the minerals industry and the natural environment.

43. Operators must comply with all applicable Federal and State laws including any regulations under the authority of the Nuclear

Regulatory Commission. BLM is currently studying the issue of land ownership of uranium mill tailings sites and will coordinate with NRC before the NRC regulations become final.

44. Title V of Public Law 95-87 (Surface Mining Control and Reclamation Act of 1977) does not amend the Mining Law, therefore, the strict reclamation standards do not apply.

45. Due to the diverse nature of exploration and mining activities it is difficult to quantify these impacts to soils.

46. The final regulations will reflect a change. Operators will be required to submit reclamation measures unless they can demonstrate an inability to do so. In this case the BLM will provide assistance in the formulation of reclamation measures.

47. In mining operations there will be some necessary degradation of the public lands. Our objective is to prevent unnecessary or undue degradation on the public lands and its associated resources. This will include the reduction of noise, dust, and groundwater contamination.

48. Section 302 b of FLPMA requires that the Secretary take action to prevent unnecessary or undue degradation; however, these actions may not impair the rights of locators, including the rights of ingress and egress. As stated earlier, some disturbances are necessary for mining operations and national mineral production. The Mine Safety and Health Administration (MSHA) also regulates road construction.

49. The threshold for requirement of a plan of operation was established at such a level that would preclude unnecessary or undue degradation.

50. We disagree. Due to similarities of the alternatives to the proposed action we felt that a comprehensive discussion of impacts would duplicate those presented in Chapter 3. Some revisions have been made in Chapter 8 of the FEIS.

51. Your comment is correct. However, this type of data is meaningless in terms of impact analysis on regulations. The proposed action is such that it may impact a single independent operator and a multimillion dollar mineral development program by a large mining company, and all those in between, in terms of capital outlay and manpower. There is no known source of data to accurately estimate the cost of the proposed action in terms of energy expenditures.

52. When a plan of operations is required, NEPA procedures will be followed.

53. The BLM did not administratively amend § 302(b) of FLPMA.

54. The "institutional approaches" as discussed in Chapter 6, p. 263 of "Surface Mining of Non-coal Minerals" ("Cosmar" report, directed by sec. 709 of the Surface Mining Control and Reclamation Act of 1977) was considered. The preferred alternative is a variation of this approach.

55. The Department's regulations are not intended to "pre-empt" State laws which currently apply to operations by mineral locators. The Department of the Interior does not assert authority under the 1872 Mining Law of FLPMA to "pre-empt" State law. We disagree, however, with Utah's other assertion. The 1872 Mining Law provides that Public Lands are open to mining activities "under regulations prescribed by law,"(30 USC § 22) and FLPMA clearly obligates the Secretary to take any action, by rule or otherwise, to prevent unnecessary or undue degradation of Public Lands (43 USC 1732(b)). The Secretary has separate, additional responsibilies under FLPMA for lands in WSA's, the California Desert Conservation Area, and under other laws such as the Endangered Species Act.

56. Reference to enactment of SMCRA does not make the State's case for the absence of this regulatory authority, since the Department had already promulgated comprehensive rules governing reclamation and operations on federal coal leases prior to the enactment of SMCRA. It is the solicitor's view that the Department has the authority to issue these regulations.

57. The Archeological and Historic Preservation Act of 1974 (16 U.S.C. § 469 a-1 et seq.) applies to Federal construction projects or federally licensed projects, activities, or programs. The Secretary must act within 60 days in order to avoid undue delay of the project or program, but is not precluded from requiring faster action by regulation.

Final EIS Preparers and Contributors

Robert Anderson	Consultant	Assistant Division Chief
Zareh Mozian	FEIS Coordinator Chapters 1-9 Air, Land, Water & Cultural Resources	Environmental Specialist
Brenda Horton	Minerals Industry Chapters 1,2,& 3	Geologist
Wayne Stevens	Minerals Industry Chapters 1-8	Geologist
Winston B. Short	Consultant	Natural Resource Specialist
George Schmidt	Minerals Industry Chapters 2 & 3	Mining Engineer
Robert Sulenski	Paleontology Chapters 2 & 3	Geologist (Paleontologist)
Dorene E. Kahl		Writer-Editor
Dorothy Freeman		Clerk (Typist)

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APPENDIX I

PART 3800 -- MINING CLAIMS UNDER THE GENERAL MINING LAWS

General

Subpart 3809 - Surface Management

Sec.

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§ 3809.0-1 Purpose.

The purpose of this subpart is to establish procedures to afford environ-

mental protection to public lands and their resources by preventing impairment of wilderness suitability or undue or unnecessary degradation of the lands and resources which may result from mining operations authorized by the United States mining laws (30 U.S.C. 22-54).

§ 3809.0-2 Objectives.

The objectives of this regulation are to:

(a) Allow and not unduly hinder mineral entry, exploration, location, operations and purchase pursuant to the United States Mining Laws, in ways that will protect the scenic, scientific and environmental values of the public lands against impairment of wilderness values and undue or unnecessary damage and to provide that management with respect to minerals operations is coordinated with appropriate State and local governmental agencies.

(b) Assure management programs that reflect consistency between the United States mining laws and other appropriate statutes.

§ 3809.0-3 Authority.

(a) Section 2319 of the Revised Statutes (30 U.S.C. 22 et seq.) provides that the exploration, location and purchase of valuable mineral deposits on the public lands shall be "under regulations prescribed by law," and section 2478 of the Revised Statutes, as amended (43 U.S.C. 1201), provides that those regulations shall be issued by the Secretary.

(b) Sections 302, 303, 601 and 603 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) require the Secretary to take any action, by regulation or otherwise, to prevent impairment or unnecessary or undue degradation of the public lands and other resources, or afford environmental protection.

§ 3809.0-5 Definitions.

As used in this subpart, the term:

(a) "Mining operations" means all functions, work, facilities, and activities in connection with the prospecting, development, and extraction or processing of mineral deposits locatable under the provisions of the Mining Law of 1872 and all uses reasonably incident thereto, whether on a mining claim or not, including the construction of roads and other means of access to and across lands subject to these regulations and making road improvements, whether the operations take place on or off the claim.

(b) "Operator" means a person conducting or proposing to conduct mining operations.

(c) "Mining claim" means any unpatented mining claim, millsite, or

tunnel site authorized by the United States mining laws.

(d) "Reclamation," which shall be commenced, conducted and completed as soon after disturbance as possible without undue interference with mining operations, means --

(1) As it applies to wilderness study areas or potential wilderness study areas:

(A) Reshaping of the lands disturbed or affected by mining operations, to its approximate original contour or to an appropriate contour, considering the surrounding topography as determined by the authorized officer;

(B) Restoring such reshaped lands by replacement of top soil; and,

(C) Revegetating the lands by using species previously occurring in the area at least to the point where natural succession is occurring.

(2) As it applies to all other public lands:

(A) Reshaping of the land disturbed or affected by mining operations, where feasible, to its approximate original contour or to an appropriate contour considering the surrounding topography and approved post-mining or post-exploration uses of the area as determined by the authorized officer. The authorized officer may approve the retention of a stable highwall or other mine workings to preserve evidence of mineralization or where reclamation is not feasible;

(B) Restoring such lands, where feasible, by the replacement of top soil;

(C) Revegetating such lands, where feasible, so as to provide a diverse vegetative cover, native to the area (or introduced species where desirable and necessary to achieve the approved post-mining or post-exploration land use) and capable of self-regeneration at least equal in permanence to the natural vegetation.

(e) "Environment" means surface and subsurface resources, both tangible and intangible, including air, water, mineral, scenic, cultural, paleontological, vegetative, soil, wildlife, fish and wilderness values.

(f) "Road" means an access route which has been improved and maintained by mechanical means to ensure relatively regular and continuous use by vehicles. It does not include a trail or way which has been created and is maintained solely by the passage of vehicles.

(g) "Wilderness" means an area of undeveloped public land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural con-

ditions and which; (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres of land or is of sufficient size as to make practicable its preservation or a roadless island; and (4) may also contain ecological, geological or other features of scientific, educational, scenic or historical value. It also means, in contrast with those areas where man and his own works dominate the landscape, an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.

(h) "Wilderness study area" means a roadless area of 5,000 acres or more or roadless island which has been found to have wilderness characteristics (thus having the potential of being included in the National Wilderness Preservation System), which shall be subject to intensive analysis through the Bureau of Land Management's planning system and public review to determine wilderness suitability, and is not yet the subject of a Congressional decision regarding its designation as wilderness.

(i) "Wilderness inventory" means an evaluation conducted under the Bureau of Land Management wilderness inventory procedures in the form of a written description and map showing those lands that meet the wilderness criteria established under section 603(a) of the Federal Land Policy and Management Act.

(j) "Impairment of suitability for inclusion in the Wilderness System" means taking actions that cause impacts, that cannot be reclaimed to the point of being substantially unnoticeable in the area as a whole by the time the Secretary of the Interior is scheduled to make a recommendation to the President on the suitability of a wilderness study area for inclusion in the National Wilderness Preservation System, or have degraded wilderness values so far, compared with the area's values for other purposes, as to significantly constrain the Secretary's recommendation with respect to the area's suitability for preservation as wilderness.

(l) "Manner and degree" means existing operation will be defined geographically by the area of active development and the logical adjacent (not necessarily contiguous) continuation of the existing activity, and not necessarily by the boundary of a particular claim or lease, and in some cases, a change in the kind of activity if the impacts from the continuation and change of activity are not of a significantly different kind than the existing impacts. However, the significant measure for these activities is still the impact they are having on the wilderness potential of an area. It is the actual use of the area, and not the existence of an entitlement for use, which is the controlling factor. In other words, an existing activity, even if impairing, may continue to be expanded in an area or progress to the next stage of development so long as the additional impacts are not significantly different than those caused by the existing activity.

In determining the manner and degree of existing operations, a rule of reason shall be employed.

(l) "Valid existing right" means a valid discovery had been made on a mining claim on October 21, 1976, and continues to be valid at the time of exercise.

(m) "Undue or unnecessary degradation" means impacts greater than those that would normally be expected from an activity being accomplished in compliance with current standards and regulations and based on sound practices including use of the best reasonably available technology.

(n) "Authorized officer" means any employee of the Bureau of Land Management to whom has been delegated the authority to perform the duties described in this part.

(o) "Substantially unnoticeable" means something that either is so insignificant as to be only a minor feature of the overall area or is not distinctly recognizable by the average visitor as being manmade or man-caused because of age, weather or biological change.

§ 3809.0-6 Policy.

It is the policy of this regulation to encourage the development of Federal mineral resources. Under the 1872 Mining Law (30 U.S.C. 22 et seq.), a person has a statutory right, not a mere privilege, consistent with Departmental regulations, to go upon the open (unappropriated and unreserved) public lands for the purpose of mineral prospecting, exploration, development and extracting. Statutory responsibilities require that mining operations include adequate and responsible measures to prevent undue or unnecessary degradation of the public lands, impairment of wilderness suitability and hazards to the public health and safety.

§ 3809.0-7 Scope.

(a) These regulations apply to mining operations conducted under the United States Mining Laws, as they affect the resources and environment of all public lands which are subject to location under those laws, and to lands where the surface has been patented and the minerals subject to location under those laws have been reserved by the United States, except those within units of the National Park System, and within the National Forest System.

(b) These regulations apply to mining operations conducted on lands subject to the following laws:

(1) Section 9 of the Act of December 29, 1916 (43 U.S.C. 299), stockraising homesteads;

(2) The Act of January 29, 1929 (30 U.S.C. 300), stock-driveway withdrawals;

(3) The Act of April 23, 1932 (43 U.S.C. 154), reclamation withdrawals;

(4) The Act of April 8, 1949 (62 Stat. 162), revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road grant lands;

(5) The Alaska Public Sales Act of August 30, 1949 (43 U.S.C. 687b-2 and b-4); and

(6) The Wild and Scenic Rivers Act of October 2, 1968, as amended (16 U.S.C. §§ 1271-1278).

(c) These regulations apply to roads and other approved means of access across public land, granted under the United States mining laws.

§ 3809.1 Plan of Operations.

An approved plan of operations shall include appropriate environmental protection and reclamation measures selected by the authorized officer that shall be carried out by the operator. An operator may prepare and submit with a plan of operations measures for the reclamation of the affected area.

§ 3809.1-1 When required.

An approved plan of operations is required prior to commencing:

(a) Any mining operations which involve construction of roads, bridges, landing areas for aircraft, or improving or maintaining such access facilities in a way that alters the alignment, width, gradient, size or character of such facilities;

(b) Any mining operations which destroy trees two or more inches in diameter at the base;

(c) Mining operations using tracked vehicles or mechanized earth moving equipment, such as bulldozers or backhoes;

(d) Any mining operations using motorized vehicles over other than "open use areas and trails" as defined in subpart 8340 of this title, Off-Road Vehicles, or which violate the restrictions of limited areas or tracts unless the use of a motorized vehicle is covered by a temporary use permit issued under subpart 8340 of this title.

(e) The construction or placing of any mobile, portable or fixed structures on public lands for more than 30 days;

(f) Any mining operations requiring the use of explosives; or,

(g) Any operation which may cause changes in a water course.

§ 3809.1-2 When not required.

A plan of operations is not required when:

(a) Searching for and occasionally removing mineral samples or specimens;

(b) Operating motorized vehicles over "open use areas and trails" or "limited areas and trails" as defined in subpart 8372 of this title, so long as the vehicles conform to the operating regulations and vehicle standards contained in that subpart, and do not violate the restrictions of limited areas and trails;

(c) Maintaining or making minor improvements of existing roads, trails, bridges, landing areas for aircraft, or other facilities for any other means of access where such improvement or maintenance does not alter the alignment, width, gradient, size or character of such facilities; or

(d) Making geological, radiometric, geochemical, geophysical or other tests and measurements using instruments, devices or drilling equipment which are transported without using mechanized earth moving equipment or tracked vehicles.

§ 3809.1-3 Contents of plan.

(a) A plan of operations shall be filed with the District Office of the Bureau of Land Management in which the claim is located.

(b) No special form is required to file a plan of operations.

(c) The plan of operations shall include:

(1) The name and mailing address both of the person for whom the operations will be conducted and of the person who will be in charge of the operations and should be contacted concerning reclamation or other aspects of the operation (any change in the mailing address shall be reported promptly to the authorized officer);

(2) A map, preferably a topographic map, or sketch showing present road, bridge, or aircraft landing area locations or other means of access, proposed road, bridge, aircraft landing area locations or other means of access, and size of areas where surface resources will be disturbed;

(3) Information sufficient to describe either the entire operation proposed or reasonably foreseeable operations (See § 3809.1-6 of this title) and

how they would be conducted, including the nature and location of actual or proposed structures and facilities. An operator may submit proposed reclamation measures as part of the plan of operations. (See § 3809.2-2 of this title).

(4) The type and condition of existing and proposed roads, bridges aircraft landing areas, including other means of access, the means of transportation or to be used and the estimated period during which the proposed activity will take place;

(5) If and when applicable, the serial number assigned to the mining claim, mill or tunnel site filed pursuant to subpart 3833 of this title, and

(6) For mining operations on-going in wilderness study areas on or before October 21, 1976, a statement as to manner and degree of the mining operations as they occurred on or before October 21, 1976.

§ 3809.1-4 Plan approval.

(a) The authorized officer shall promptly acknowledge receipt of a plan of operations;

(b) Within 30 days of receipt of a plan of operations, the authorized officer shall review the proposal, considering the economic, technical and legal factors of the operation in determining the requirements needed to prevent impairment of wilderness suitability on lands under wilderness review or undue or unnecessary degradation of the public lands, and notify the operator, in writing:

(1) That the plan of operations is approved or is unacceptable and the reasons therefor; or

(2) Of any changes in, or additions to, the plan of operations considered necessary to meet the purpose of these regulations;

(3) That information sufficient to describe either the entire operation is being reviewed, but that more time, not to exceed an additional 60 days is necessary to complete such review, setting forth the reasons why additional time is needed, except in those instances where it is determined that an Environmental Impact Statement or compliance with section 106 of the National Historic Preservation Act (NHPA) or the Endangered Species Act is needed. Periods during which the area of operation operations is inaccessible for inspection due to climatic conditions, fire hazards or other physcial conditions or legal impediments, shall not be included when counting the 60 calendar day period; or

(4) The proposed operations do not require a plan of operations.

(c) If the authorized officer does not notify the operator of any action on the plan of operations within the 30-day period, or the 60-day

extension, or notify the operator of the need for an Environmental Impact Statement or compliance with section 106 of the NHPA or section 7 of the Endangered Species Act, operations may proceed as set out in the plan of operations. The option to begin operations under this section does not constitute approval of a plan of operations. However, if, at a later date, the authorized officer finds the operations being conducted under an unapproved plan are either impairing wilderness suitability or causing undue or unnecessary degradation of the public lands, the authorized officer shall notify the operator that the operations are not in compliance. If the operator is notified of the need for an Environmental Impact Statement, the plan of operations shall not be approved before 30 days after a final statement is prepared and made available to the Environmental Protection Agency, commenting agencies, and the public. If the operator is notified of the need for compliance with section 106 of NHPA or section 7 of the Endangered Species Act, the plan of operations shall not be approved until the compliance responsibilities of the Bureau of Land Management are satisfied.

(d) The authorized officer shall undertake an appropriate level of cultural resource inventory of the areas to be disturbed. The inventory shall be completed within the time allowed by these regulations for approval of the plan of operations. If properties, including cultural resource properties listed on or eligible for listing on the National Register of Historic Places, are identified during the inventory, no operations which would affect those resources shall be approved until compliance with section 106 of the NHPA is accomplished. The operator is not required to do or to pay for an inventory or salvage. The responsibility and cost of the cultural resource mitigation included in an approved plan of operation shall be the operator's.

(e) Pending final approval of the plan of operations, the authorized officer may approve any operations that may be necessary for timely compliance with requirements of Federal and State laws. Such operations shall be conducted so as to prevent impairment of wilderness suitability or undue or unnecessary degradation.

(f) The transfer of a plan of operations shall become effective only after the transferee has satisfied the requirements of § 3809.1-8 of this title as it relates to bonds.

§ 3809.1-5 Additional requirements for approval of a plan of operations on lands under wilderness review.

In addition to the requirements for approval of a plan of operations set forth above, the following additional requirements shall be met for mining operations on lands of 5,000 acres or more or roadless islands under wilderness review:

(a) For mining operations existing on October 21, 1976, the authorized officer shall determine whether the mining operations on the date of submission of the plan of operations differ in manner and degree from the operations which were in existance on October 21, 1976. Pending approval of a plan of operations, mining operations may continue in the same manner and degree as on October 21, 1976, subject to measures that shall prevent undue or unnecessary degradation of public lands and resources as determined by the authorized officer. The authorized officer shall not approve a plan of operations for mining operations that exceed the manner and degree of those operations existing on October 21, 1976, the impacts of which impair the suitability of the area for preservation as wilderness. However, the authorized officer may permit modifications to be made to make the plan acceptable.

(b) For mining operations begun after October 21, 1976, the authorized officer shall review the plan of operations to determine if the operations are impairing the suitability of the area for preservation as wilderness. Pending approval of the plan of operations, mining operations may continue in a manner that prevents undue or unnecessary degradation. After completing the review of the plan of operations, the authorized officer shall give the operator written notice that:

(1) the plan is approved subject to measures that shall prevent the impairment of suitability of an area for preservation as wilderness as determined by the authorized officer; or

(2) the anticipated impacts of the mining operations are such that all or part of further operations will impair the suitability of the area for preservation as wilderness, and the plan is disapproved and continuance of such operations is not allowed.

(c) A plan of operations on a claim with a valid existing right shall be approved subject to measures that shall prevent undue or unnecessary degradation of the area.

§ 3809.1-6 Modification of plan.

(a) If the development of a plan for an entire operation is not possible, the operator shall file an initial plan setting forth his proposed operation to the degree reasonably foreseeable at that time. Thereafter, the operator shall file a supplemental plan or plans prior to undertaking any operations not covered by the initial plan.

(b) At any time during operations under an approved plan of operations, the authorized officer or the operator may initiate a modification of the plan detailing any necessary change that was unforeseen at the time

of filing of the plan of operations. If the operator does not furnish a proposed modification within a time considered reasonable by the authorized officer, the authorzed officer may recommend to the State Director that the operator be required to submit a proposed modification of the plan. The recommendation of the authorized officer shall be accompanied by a statement setting forth the supporting facts and reasons for his recommendations. In acting upon such recommendation, except modifications submitted under § 3809.1-4(c) of this title, the State Director shall determine;

(1) whether all reasonable measures were taken by the authorized officer to predict the environmental impacts of the proposed operations;

(2) whether the disturbance is or may become of such significance as to require modification of the plan of operations in order to meet the requirement for environmental protection specified in § 3809.2-2 of this title; and,

(3) whether the disturbance can be minimized using reasonable means. Lacking such a determination by the State Director, an operator is not required to submit a proposed modification of an approved plan of operations. Operations may continue in accordance with the approved plan of operations until a modified plan is approved, unless the State Director determines that the operations are causing impairment of wilderness suitability or undue or unnecessary degradation to surface resources. The State Director shall advise the operator of those measures needed to avoid such damage and the operator shall immediately take all necessary steps to implement measures recommended by the State Director.

(c) A supplemental plan of operations or a modification of an approved plan of operations shall be approved by the authorized officer in the same manner as the initial plan of operations.

§ 3809.1-7 Existing operations.

(a) Persons conducting mining operations on the effective date of these regulations, who would be required to submit a plan of operations under § 3809.1-1 of this title may continue operations but shall, within 120 days after the effective date of these regulations, submit a plan of operations. Upon a showing of good cause, the authorized officer shall grant an extension of time to submit a plan of operations not to exceed an additional 180 days.

(b) Operations may continue according to the submitted plan of operations during its review. If the authorized officer determines that the operations are causing impairment of wilderness suitability or undue or unnecessary degradation of the lands involved, the authorized officer shall advise the operator of those measures needed to avoid such damage, and the operator shall immediately take all necessary steps to implement measures recommended by the authorized officer.

(c) Upon approval of a plan of operations, mining operations shall be conducted in accordance with the approved plan.

§ 3809.1-8 Bond requirements.

(a) Any operator who conducts mining operations under an approved plan of operations shall, if required to do so by the authorized officer, furnish a bond in an amount determined by the authorized officer. The authorized officer may determine not to require a bond in circumstances where mining operations would cause nominal damage, or the operator has an excellent past record for reclamation. In determining the amount of the bond, the authorized officer shall consider the estimated cost of stabilizing and reclaiminig all areas disturbed consistent with § 3809.2-2(h) of this title.

(b) In lieu of a bond, the operator may deposit and maintain in a Federal depository account of the United States Treasury, as directed by the authorized officer, cash in an amount equal to the required dollar amount of the bond or negotiable securities of the United States having a face and market value at the time of deposit of not less than the required dollar amount of the bond.

(c) In place of the individual bond on each separate operation, a blanket bond of not less than $100,000 covering statewide operations, or of not less than $300,000 covering nationwide operations, may be furnished, at the option of the operator, if the terms and conditions as determined by the authorized officer are sufficient to comply with these regulations.

(d) In the event that an approved plan of operations is modified in accordance with § 3809.1-6 of this title, the authorized officer shall review the initial bond for adequacy and, if necessary, shall adjust the amount of bond required to conform to the plan of operations, as modified.

(e) When a mining claim is patented, the authorized officer shall release the operator from that portion of the performance bond and plan of operations which applies to operations within the boundaries of the patented lands. The authorized officer shall release the operator from the remainder of the performance bond and plan of operations, including the portion covering approved means of access outside the boundaries of the mining claim, when the operator has either completed reclamation in accordance with subsection (f) of this section or been granted a right-of-way for such means of access under title V of the Federal Land Policy and Management Act. This provision does not apply to patents issued within the boundaries of the California Desert Conservation Area.

(f)(1) When all or any portion of the reclamation has been completed in accordance with paragraphs (g) and (h) of § 3809.2-2 of this title, the operator shall notify the authorized officer who shall promptly make a joint

inspection with the operator. The authorized officer shall then notify the operator whether the performance under the plan of operations is accepted. When the authorized officer has accepted as completed any portion of the reclamation, the authorized officer shall reduce proportionally the amount of bond with respect to the remaining reclamation. Except in lands under wilderness review, the authorized officer may continue the bond as it relates to revegetation for only the amount necessary for revegetation of each planting area for a period not to exceed 5 years after the first vegetative planting. The financial liability incurred by the operator as a result of the continuation of the bond shall not exceed an amount directly proportionate to the probability of successful revegetation.

(2) When, during any extended period of a bond, the authorized officer determines that revegetation is likely to be successful before the end of such period, or that natural conditions will preclude successful revegetation, the authorized officer may release the operator from liability under the bond for revegetation of the planting area.

§ 3809.1-9 Operations within Bureau of Land Management Wilderness Areas.

(a) The United States mining laws shall extend to each Bureau of Land Management Wilderness Area until midnight December 31, 1983. Subject to valid existing rights, no person shall have any right or interest in or to any mineral deposit which may be discovered through prospecting and exploration operations or other information-gathering activity conducted after the date on which the United States mining laws cease to apply to the specific Wilderness Area.

(b) Persons locating mining claims in any Bureau of Land Management Wilderness Area on or after the date on which said Wilderness Area was included in the National Wilderness Preservation System shall be accorded the rights provided by the provisions of the Wilderness Act which apply to national forest wilderness areas.

§ 3809.2 Environmental protection.

§ 3809.2-1 Environmental assessment.

(a) When a plan of operations or significant modification is filed, the authorized officer shall make an environmental assessment to identify the impacts of the proposed mining operations upon the environment and determine whether an environmental impact statement is required.

(b) Following completion of the environmental assessment, the authorized officer shall develop measures deemed necessary for inclusion in the plan of operations that shall prevent impairment of wilderness suitability or undue or unnecessary degradation of lands and resources.

(c) If, as a result of the environmental assessment, the authorized officer determines that there is substantial public interest in the proposed mining operations, the operator may be notified that an additional period of time is required to consider public comments. The period shall not exceed the additional 60 days provided for approval of a plan in §3809.1-4 of this title, except as provided for in cases requiring an environmental impact statement, a cultural resources inventory or compliance with section 7 of the Endangered Species Act.

(d) If the surface resources of the lands involved are administered by an agency other than the Bureau of Land Management, that agency shall be responsible for the environmental assessment. In cases of mixed administration, the agencies shall make a joint environmental assessment.

§ 3809.2-2 Requirements for environmental protection.

(a) Air Quality. The operators shall comply with applicable Federal and State air quality standards, including the requirements of the Clean Air Act (42 U.S.C. 1857 et seq.).

(b) Water Quality. The operator shall comply with applicable Federal and State water quality standards, including regulations issued pursuant to the Federal Water Pollution Control Act (33 U.S.C. 1151 et seq.).

(c) Solid Wastes. The operator shall comply with applicable Federal and State standards for the disposal and treatment of solid wastes. All garbage, refuse or waste shall either be removed from the affected lands or disposed of or treated to minimize, so far as is practicable, its impact on the environment and the surface resources. All tailings, waste rock, trash, deleterious materials or substances and other waste produced by operations shall be deployed, arranged, disposed of or treated to minimize adverse impact upon the environment, subsurface and surface resources.

(d) Visual Resources. The operator shall, to the extent practicable, harmonize operations with the visual resources identified by the authorized officer, through such measures as the design, location of operating facilities and improvements to blend with the landscape.

(e) Fisheries, Wildlife and Plant Habitat. The operator shall take such action as may be needed to minimize or prevent adverse impact upon plants, fish, and wildlife, especially threatened or endangered species, and their habitat which may be affected by the operations.

(f) Cultural and Paleontological Resources.

(1) The operator shall not knowingly disturb, alter, injure, destroy or take any scientifically important paleontological remains or any historical, archaeological, or cultural district, site, structure, building or object.

(2) The operator shall immediately bring to the attention of the authorized officer any such cultural and/or paleontological resources that might be altered or destroyed by his operation, and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his attention, and determine within 10 working days what action shall be taken with respect to suc . discoveries.

(3) The responsibility and the cost of investigations and salvage of such values discovered during approved operations shall be the Federal Government's.

(4) Roads. No new roads or temporary access routes that would cause more than temporary impact and therefore would impair wilderness suitability shall be constructed in a wilderness study area. Roads and temporary access routes shall be constructed and maintained to assure adequate drainage and to control or prevent damage to soil, water and other resource values. Unless otherwise approved by the authorized officer, roads or tempoaray access routes no longer needed for operations shall be closed to normal vehicular traffic; bridges and culverts shall be removed; cross drains, dips or water bars shall be constructed, and the road or temporary access route surface shall be shaped to as near a natural contour as practicable and be stabilized and revegetated as required in the plan of operations.

(h) Reclamation.

(1) Unless a longer time is allowed by the authorized officer, the operator shall perform reclamation of those lands disturbed or affected by the mining operations conducted under an approved plan of operations as contemporaneously as feasible with operations. The disturbance or effect on mined land shall not include that caused by separate operations in areas abandoned before the effective date of these regulations.

(2) An operator may prepare and submit with a plan of operations measures for reclamation of the affected area.

(i) Protection of survey monuments. The operator shall, to the extent practicable and consistent with the operation, protect all survey monuments, witness corners, reference monuments, bearing trees and line trees against destruction, obliteration or damage from the approved operations. If, in the course of operations, any monuments, corners or accessories are destroyed, obliterated or damaged by such operations, the operator shall immediately report the matter to the authorized officer. The authorized officer shall prescribe, in writing, the requirements for the restoration or reestablishment of monuments, corners, bearing trees and line trees.

(j) Areas of Critical Environmental Concern. The operator shall take action as may be necessary to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards in designated areas of critical environmental concern.

§ 3809.3 General provisions.

§ 3809.3-1 Applicability of State law.

(a) After the effective date of these regulations, and from time to time thereafter, the Secretary shall direct a prompt review of State laws and regulations in effect or adopted and due to come into effect, relating to reclamation of lands disturbed by exploration for or surface mining of minerals locatable under the United States mining laws. If, after such review, the Secretary determines that the requirements of the laws and regulations of any such State afford general protection of environmental quality and values at least as stringent as would occur under exclusive application of these regulations, he shall, by rulemaking, direct that the requirements of such State laws and regulations (including those relating to bonding) thereafter be applied as conditions upon the approval of any proposed plan of operations.

(b) After the effective date of these regulations, the Secretary shall consult with appropriate representatives of each State to formulate and enter into agreements to provide for a joint Federal-State program for administration and enforcement. The purpose of the program would be to prevent unnecessary or undue degradation or afford environmental protection of the public lands and their resources from exploration and mining operations which are conducted under the United States mining laws. The Secretary shall make such an agreement only after a determination that the State has the capability to carry out the administration and enforcement program. Such agreements shall, whenever possible, provide for State administration and enforcement of such programs, provided that Federal interests are protected. Any such agreement shall be entered into by rulemaking, and shall have its principal purpose the avoidance of duplication of administration and enforcement of reclamation laws governing locatable mineral deposits on public lands.

(c) Before final rules are issued which implement the provisions of subsection (a) and (b) of this section, certification or other approval issued by State agencies of compliance with laws and regulations (including those relating to bonding) may be accepted by the authorized officer as compliance with similar or parallel requirements of these regulations.

§ 3809.3-2 Noncompliance.

(a) An operator who conducts mining operations undertaken either without an approved plan of operations or without taking actions specified

in a notice of noncompliance within the time specified therein, may be enjoined by an appropriate court order from continuing such operations and be liable for damages for such unlawful acts.

(b) Whenever the authorized officer determines that an operator is failing or has failed to comply with the requirements of an approved plan of operations, or with the provisions of these regulations and that non-compliance is causing impairment of wilderness suitability or undue or unnecessary degradation of the resources of the lands involved, the authorized officer shall serve a notice of noncompliance upon the operator by delivery in person to the operator or his authorized agent, or by certified mail addressed to his last known address.

(c) A notice of noncompliance shall specify in what respects the operator is failing or has failed to comply with the requirements of the plan of operations or the provisions of applicable regulations, and shall specify the actions which are in violation of the plan or regulations and the actions which shall be taken to correct the non-compliance and the time limits, not to exceed 30 days, within which corrective action shall be taken.

§ 3809.3-3 Access.

(a) An operator is entitled to non-exclusive access to his mining operations consistent with provisions of the United States mining laws and Departmental regulations.

(b) In approving access as part of a plan of operations, the authorized officer shall specify the location of the access route, the design, construction, operation and maintenance standards, means of transportation and other conditions necessary to prevent the impairment of wilderness suitability, protect the environment, the public health and safety, Federal property and economic interests, and the interests of other lawful users of adjacent lands or lands traversed by the access road. The authorized officer may also require the operator to utilize existing roads in order to minimize the number of separate rights-of-way, and, if practicable, to construct access roads within a designated transportation and utility corridor. When commercial hauling is involved and the use of an existing road is required, the authorized officer may require the operator to make appropriate arrangements for use and maintenance.

§ 3809.3-4 Multiple-use conflicts.

In the event that uses under any lease, license, permit or other authorization pursuant to the provisions of any other law, conflict, interfere with, or endanger operations in approved plans or otherwise authorized by these regulations, the conflicts shall be reconciled, as much as practicable, by the authorized officer.

§ 3809.3-5 Fire prevention and control.

The operator shall comply with all applicable Federal and State fire laws and regulations, and shall take all reasonable measures to prevent and suppress fires on the area of mining operations.

§ 3809.3-6 Maintenance and public safety.

During all operations, the operator shall maintain his structures, equipment, and other facilities in a safe and orderly manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced or otherwise identified to protect the public in accordance with applicable Federal and State law and regulations.

§ 3809.3-7 Inspection.

The authorized officer shall periodically inspect operations to determine if the operator is complying with these regulations and the approved plan of operations, and the operator shall permit access of the authorized officer for this purpose.

§ 3809.3-8 Notice of suspension of operations.

(a) Except for seasonal suspension, the operator shall notify the authorized officer of any suspension of operations within 30 days after such suspension. This notice shall include:

(1) Verification of intent to maintain structures, equipment and other facilities, and

(2) The expected re-opening date.

(b) The operator shall maintain the operating site, structures and other facilities in a safe and environmentally acceptable condition during non-operating periods.

(c) The name and address of the operator shall be clearly posted and maintained in a prominent place at the entrances to the area of mining operations during periods of non-operation.

§ 3809.3-9 Cessation of operations.

The operator shall, within 1 year following cessation of operations, remove all structures, equipment and other facilities and reclaim the site of operations, unless variances are agreed to, in writing, by the authorized officer. Additional time may, unless otherwise prohibited, be granted by the authorized officer upon a showing of good cause by the operator.

§ 3809.4 Appeals.

(a) Any party adversely affected by a decision of the authorized officer or the State Director made pursuant to the provisions of this subpart shall have a right of appeal to the Board of Land Appeals, Office of Hearings and Appeals, pursuant to part 4 of this title.

(b) In any case involving lands under the jurisdiction of any agency other than the Department of the Interior, or an office of the Department of the Interior other than the Bureau of Land Management, the office rendering a decision shall designate the authorized officer of such agency as an adverse party on whom a copy of any notice of appeal and any statement of reasons, written arguments, or briefs shall be served.

§ 3809.5 Public availability of information.

(a) Except as provided herein, all information and data, including plans of operation, submitted by the operator shall be available for examination by the public at the office of the authorized officer in accordance with the provisions of the Freedom of Information Act (F.O.I.A.).

(b) Information and data submitted and specifically identified by the operator and so determined by the authorized officer as containing trade secrets or confidential or privileged commercial or financial information shall not be available for public examination.

(c) The determination concerning specific information which may be withheld from public examination shall be made in accordance with the rules in 43 CFR Part 2.

§ 3809.6 Special provisions relating to mining claims patented within the boundaries of the California Desert Conservation Area.

All patents issued on mining claims located within the boundaries of the California Desert Conservation Area shall contain provisions making said patent subject to these regulations, including provisions for continuation of mining plans and bonding provisions as they apply to the lands covered by the patent.

Secretary of the Interior

federal register

NATIONAL FOREST MINERAL RESOURCES—USDA rules on prospecting, exploration and mining procedures; effective 9-1-74

Title 36—Parks, Forests, and Public Property

CHAPTER II—FOREST SERVICE, DEPARTMENT OF AGRICULTURE

NATIONAL FORESTS SURFACE USE UNDER U.S. MINING LAWS

Regulations are hereby adopted concerning the use of the surface of National Forest System lands by persons operating under the United States mining laws of 1872, as amended. Parts 251 and 293 are amended and a new Part 252 is added.

The public was afforded an opportunity to comment on proposed rulemaking published on December 19, 1973 (38 FR 34817) and on July 16, 1974 (39 FR 26038). Respondents included Government agencies (National, State, and local), conservation organizations, mining associations, United States Senators and Congressmen, and individuals directly or indirectly concerned with mineral operations. The proposed regulations were also the subject of oversight hearings by the Public Lands Subcommittee of the Committee on Interior and Insular Affairs of the House of Representatives.

Comments ranged from total opposition to unqualified support of the proposals. Critical comments were in the majority. Many persons suggested changes or improvements in both wording and substance.

Although many respondents objected to the operating plan requirement, the essence of adequate regulation is development of operating plans which reflect both the necessities for environmental protection and for the use of surface resources in connection with mineral operations. A provision for operating plans is part of the regulations.

A major concern expressed by the mining industry, and noted by the Public Lands Subcommittee of the House Committee on Interior and Insular Affairs, is the possibility of unreasonable enforcement of the regulations, with resulting cost increases that could make otherwise viable mineral operations prohibitively expensive. The Forest Service recognizes that prospectors and miners have a statutory right, not mere privilege, under the 1872 mining law and the Act of June 4, 1897, to go upon and use the open public domain lands of the National Forest System for the purposes of mineral exploration, development and production. Exercise of that right may not be unreasonably restricted. Specific provision has been made in the operating plan approval section of the regulations charging Forest Service administrators with the responsibility to consider the economics of operations, along with the other factors, in determining the reasonableness of the requirements for surface resource protection.

Many comments objected to the time provided for Forest Service response to proposed operating plans. No change has been made in these provisions since the time allowances are reasonable as outside limits. Even so, Forest Service administrators are expected to process operating plans promptly with the objective of responding, on the average, in half of the time allowed.

The requirement for a minimum bond of $2,000 for any activities subject to operating plans was the provision most heavily criticized. Many respondents pointed to the discriminatory effect and negative impact on small miners and prospectors having relatively limited means. The bond provision has been changed to reduce discriminatory effects and to be more specific as to coverage, but remain responsive to the need to maintain the responsibilities of operators for reclamation and mitigation of the effects of surface disturbing operations.

Some respondents felt that all information and data submitted on proposed operations should be subject to full public disclosure. The rule of reasonableness is particularly applicable since proprietary data and competitive rights are involved. The section on availability of information to the public recognizes these factors.

Language has been modified to make more clear that the intent of these regulations is protection of the surface resources on National Forest System lands.

A number of comments noted the lack of a provision for a "notice of intent to operate." Such a provision has been included in the regulations.

The provision concerning data to be furnished in an operating plan has been simplified and is clarified to state that the Forest Service, rather than the operator, has the responsibility for analyzing the environmental impacts that may be expected from proposed operations.

Many respondents criticized the language about environmental impact statements and appeals procedures. Those sections have been clarified. The number of levels of appeal provided is small in order to allow aggrieved parties quick access to the courts to seek redress.

Seasonal factors in most of the western mountains preclude prospecting and exploration during winter and early spring. A 120-day grace period is provided within which to file required operating plans in the case of operations underway on the effective date of the regulations. Under the circumstances, the regulations should not have significant effect on ongoing operations during the remainder of this operating season.

A Final Environmental Statement, prepared in accordance with section 102(2)(c) of the National Environmental Policy Act of January 1, 1970 (42 U.S.C. 4332(2)(C)), was filed with the Council on Environmental Quality on July 16, 1974. The statement discussed the environmental impact of issuing the regulations as proposed.

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FEDERAL REGISTER, VOL. 39, NO. 168—WEDNESDAY, AUGUST 28, 1974

The regulations will be effective September 1, 1974.

The amendment of Chapter II follows:

PART 251—LAND USES

§ 251.12 [Revoked]

1. Part 251 is amended by revoking § 251.12.

PART 252—MINERALS

2. A new Part 252 is added to read as follows:

Sec.
252.1 Purpose.
252.2 Scope.
252.3 Definitions.
252.4 Plan of operations—notice of intent—requirements.
252.5 Plan of operations—approval.
252.6 Availability of information to the public.
252.7 Inspection, noncompliance.
252.8 Requirements for environmental protection.
252.9 Maintenance during operations, public safety.
252.10 Cessation of operations, removal of structures and equipment.
252.11 Prevention and control of fire.
252.12 Access.
252.13 Bonds.
252.14 Appeals.
252.15 Operations within National Forest Wilderness.

AUTHORITY: 30 Stat. 35 and 36, as amended (16 U.S.C. 478, 551), unless otherwise noted.

§ 252.1 Purpose.

It is the purpose of these regulations to set forth rules and procedures through which use of the surface of National Forest System lands in connection with operations authorized by the United States mining laws (30 U.S.C. 21–54), which confer a statutory right to enter upon the public lands to search for minerals, shall be conducted so as to minimize adverse environmental impacts on National Forest System surface resources. It is not the purpose of these regulations to provide for the management of mineral resources; the responsibility for managing such resources is in the Secretary of the Interior.

§ 252.2 Scope.

These regulations apply to operations hereafter conducted under the United States mining laws of May 10, 1872, as amended (30 U.S.C. 22 et seq.), as they affect surface resources on all National Forest System lands under the jurisdiction of the Secretary of Agriculture to which such laws are applicable: *Provided, however;* That any area of National Forest lands covered by a special Act of Congress (16 U.S.C. 482a–482q) is subject to the provisions of this part and the provisions of the special act, and in the case of conflict the provisions of the special act shall apply.

§ 252.3 Definitions.

For the purposes of this part the following terms, respectively, shall mean:

(a) *Operations.* All functions, work and activities in connection with prospecting, exploration, development, mining or processing of mineral resources and all uses reasonably incident thereto, including roads and other means of access on lands subject to the regulations in this part, regardless of whether said operations take place on or off mining claims.

(b) *Operator.* A person conducting or proposing to conduct operations.

(c) *Person.* Any individual, partnership, corporation, association, or other legal entity.

(d) *Mining claim.* Any unpatented mining claim or unpatented millsite authorized by the United States mining laws of May 10, 1872, as amended (30 U.S.C. 22 et seq.).

(e) *Authorized officer.* The Forest Service officer to whom authority to review and approve operating plans has been delegated.

§ 252.4 Plan of Operations—Notice of Intent—Requirements.

(a) Except as provided in paragraph (2) of this section, a notice of intention to operate is required from any person proposing to conduct operations which might cause disturbance of surface resources. Such notice of intention shall be submitted to the District Ranger having jurisdiction over the area in which the operations will be conducted. If the District Ranger determines that such operations will likely cause significant disturbance of surface resources, the operator shall submit a proposed plan of operations to the District Ranger.

(1) The requirements to submit a plan of operations shall not apply (i) to operations which will be limited to the use of vehicles on existing public roads or roads used and maintained for National Forest purposes, (ii) to individuals desiring to search for and occasionally remove small mineral samples or specimens, (iii) to prospecting and sampling which will not cause significant surface resource disturbance and will not involve removal of more than a reasonable amount of mineral deposit for analysis and study, (iv) to marking and monumenting a mining claim and (v) to subsurface operations which will not cause significant surface resource disturbance.

(2) A notice of intent need not be filed (i) where a plan of operations is submitted for approval in lieu thereof, (ii) for operations excepted in paragraph (1) of this section from the requirement to file a plan of operations, (iii) for operations which will not involve the use of mechanized earthmoving equipment such as bulldozers or backhoes and will not involve the cutting of trees. Each notice of intent to operate shall provide information sufficient to identify the area involved, the nature of the proposed operations, the route of access to the area of operations and the method of transport. If a notice of intent is filed the District Ranger will, within 15 days of receipt thereof, notify the operator whether a plan of operations is required.

(b) Any person conducting operations on the effective date of these regulations, who would have been required to submit a plan of operations under § 252.4 (a), may continue operations but shall within 120 days thereafter submit a plan of operations to the District Ranger having jurisdiction over the area within which operations are being conducted: *Provided, however,* That upon a showing of good cause the authorized officer will grant an extension of time for submission of a plan of operations, not to exceed an additional 6 months. Operations may continue according to the submitted plan during its review, unless the authorized officer determines that the operations are unnecessarily or unreasonably causing irreparable damage to surface resources and advises the operator of those measures needed to avoid such damage. Upon approval of a plan of operations, operations shall be conducted in accordance with the approved plan. The requirement to submit a plan of operations shall not apply (1) to operations excepted in § 252.4(a) or (2) to operations concluded prior to the effective date of the regulations in this part.

(c) The plan of operations shall include:

(1) The name and legal mailing address of the operators (and claimants if they are not the operators) and their lessees, assigns, or designees.

(2) A map or sketch showing information sufficient to locate the proposed area of operations on the ground, existing and/or proposed roads or access routes to be used in connection with the operations as set forth in § 252.12 and the approximate location and size of areas where surface resources will be disturbed.

(3) Information sufficient to describe or identify the type of operations proposed and how they would be conducted, the type and standard of existing and proposed roads or access routes, the means of transportation used or to be used as set forth in § 252.12, the period during which the proposed activity will take place, and measures to be taken to meet the requirements for environmental protection in § 252.8.

(d) The plan of operations shall cover the requirements set forth in paragraph (c) of this section, as foreseen for the entire operation for the full estimated period of activity: *Provided, however,* That if the development of a plan for an entire operation is not possible at the time of preparation of a plan, the operator shall file an initial plan setting forth his proposed operation to the degree reasonably foreseeable at that time, and shall thereafter file a supplemental plan or plans whenever it is proposed to undertake any significant surface disturbance not covered by the initial plan.

(e) At any time during operations under an approved plan of operations, the authorized officer may ask the operator to furnish a proposed modification of the plan detailing the means of minimiz-

ing unforeseen significant disturbance of surface resources. If the operator does not furnish a proposed modification within a time deemed reasonable by the authorized officer, the authorized officer may recommend to his immediate superior that the operator be required to submit a proposed modification of the plan.

The recommendation of the authorized officer shall be accompanied by a statement setting forth in detail the supporting facts and reasons for his recommendations. In acting upon such recommendation, the immediate superior of the authorized officer shall determine (1) whether all reasonable measures were taken by the authorized officer to predict the environmental impacts of the proposed operations prior to approving the operating plan, (2) whether the disturbance is or probably will become of such significance as to require modification of the operating plan in order to meet the requirements for environmental protection specified in § 252.8 and (3) whether the disturbance can be minimized using reasonable means. Lacking such determination that unforeseen significant disturbance of surface resources is occurring or probable and that the disturbance can be minimized using reasonable means, no operator shall be required to submit a proposed modification of an approved plan of operations. Operations may continue in accordance with the approved plan until a modified plan is approved, unless the immediate superior of the authorized officer determines that the operations are unnecessarily or unreasonably causing irreparable injury, loss or damage to surface resources and advises the operator of those measures needed to avoid such damage.

(f) Upon completion of an environmental analysis in connection with each proposed operating plan, the authorized officer will determine whether an environmental statement is required. Not every plan of operations, supplemental plan or modification will involve the preparation of an environmental statement. Environmental impacts will vary substantially depending on whether the nature of operations is prospecting, exploration, development, or processing, and on the scope of operations (such as size of operations, contruction required, length of operations and equipment required), resulting in varying degrees of disturbance to vegetative resources, soil, water, air, or wildlife. The Forest Service will prepare any environmental statements that may be required.

§ 252.5 Plan of Operations—Approval.

(a) Operations shall be conducted in accordance with an approved plan of operations, except as provided in section (b) of this section and in § 252.4(a), (b), and (e). A proposed plan of operation shall be submitted to the District Ranger, who shall promptly acknowledge receipt thereof to the operator. The authorized officer shall, within thirty (30) days of such receipt, analyze the proposal, considering the economics of the operation along with the other factors in determining the reasonableness of the requirements for surface resource protection, and;

(1) Notify the operator that he has approved the plan of operations, or

(2) Notify the operator that the proposed operations are such as not to require an operating plan; or

(3) Notify the operator of any changes in, or additions to, the plan of operations deemed necessary to meet the purpose of the regulations in this part; or

(4) Notify the operator that the plan is being reviewed, but that more time, not to exceed an additional sixty (60) days, is necessary to complete such review, setting forth the reasons why additional time is needed: *Provided, however*, That days during which the area of operations is inaccessible for inspection shall not be included when computing the sixty (60) day period; or

(5) Notify the operator that the plan cannot be approved until a final environmental statement has been prepared and filed with the Council on Environmental Quality as provided in § 252.4(f).

(b) Pending final approval of the plan of operations, the authorized officer will approve such operations as may be necessary for timely compliance with the requirements of Federal and State laws, so long as such operations are conducted so as to minimize environmental impacts as prescribed by the authorized officer in accordance with the standards contained in § 252.8.

(c) A supplemental plan or plans of operations provided for in § 252.4(d) and a modification of an approved operating plan as provided for in § 252.4(e) shall be subject to approval by the authorized officer in the same manner as the initial plan of operations: *Provided, however*, That a modification of an approved plan of operations under § 252.4(e) shall be subject to approval by the immediate superior of the authorized officer in cases where it has been determined that a modification is required.

(d) In the provisions for review of operating plans, the Forest Service will arrange for consultation with appropriate agencies of the Department of the Interior with respect to significant technical questions concerning the character of unique geologic conditions and special exploration and development systems, techniques, and equipment, and with respect to mineral values, mineral resources, and mineral reserves. Further, the operator may request the Forest Service to arrange for similar consultations with appropriate agencies of the U.S. Department of the Interior for a review of operating plans.

§ 252.6 Availability of information to the public.

Except as provided herein, all information and data submitted by an operator pursuant to the regulations in this part shall be available for examination by the public at the Office of the District Ranger in accordance with the provisions of 7 CFR 1.1–1.6 and 36 CFR 200.5–2.10. Specifically identified information and data submitted by the operator as confidential concerning trade secrets or privileged commercial or financial information will not be available for public examination. Information and data to be withheld from public examination may include, but is not limited to, known or estimated outline of the mineral deposits and their location, attitude, extent, outcrops, and content, and the known or planned location of exploration pits, drill holes, excavations pertaining to location and entry pursuant to the United States mining laws, and other commercial information which relates to competitive rights of the operator.

§ 252.7 Inspection, noncompliance.

(a) Forest Officers shall periodically inspect operations to determine if the operator is complying with the regulations in this part and an approved plan of operations.

(b) If an operator fails to comply with the regulations or his approved plan of operations and the noncompliance is unnecessarily or unreasonably causing injury, loss or damage to surface resources the authorized officer shall serve a notice of noncompliance upon the operator or his agent in person or by certified mail. Such notice shall describe the noncompliance and shall specify the action to comply and the time within which such action is to be completed, generally not to exceed thirty (30) days: *Provided, however*, That days during which the area of operations is inaccessible shall not be included when computing the number of days allowed for compliance.

§ 252.8 Requirements for Environmental Protection.

All operations shall be conducted so as, where feasible, to minimize adverse environmental impacts on National Forest surface resources, including the following requirements:

(a) *Air Quality.* Operator shall comply with applicable Federal and State air quality standards, including the requirements of the Clean Air Act, as amended (42 U.S.C. 1857 et seq.).

(b) *Water Quality.* Operator shall comply with applicable Federal and State water quality standards, including regulations issued pursuant to the Federal Water Pollution Control Act, as amended (33 U.S.C. 1151 et seq.).

(c) *Solid Wastes.* Operartor shall comply with applicable Federal and State standards for the disposal and treatment of solid wastes. All garbage, refuse, or waste, shall either be removed from National Forest lands or disposed of or treated so as to minimize, so far as is practicable, its impact on the en-

vironment and the forest surface resources. All tailings, dumpage, deleterious materials or substances and other waste produced by operations shall be deployed, arranged, disposed of or treated so as to minimize adverse impact upon the environment and forest surface resources.

(d) *Scenic Values.* Operator shall, to the extent practicable, harmonize operations with scenic values through such measures as the design and location of operating facilities, including roads and other means of access, vegetative screening of operations, and construction of structures and improvements which blend with the landscape.

(e) *Fisheries and Wildlife Habitat.* In addition to compliance with water quality and solid waste disposal standards required by this section, operator shall take all practicable measures to maintain and protect fisheries and wildlife habitat which may be affected by the operations.

(f) *Roads.* Operator shall construct and maintain all roads so as to assure adequate drainage and to minimize or, where practicable, eliminate damage to soil, water, and other resource values. Unless otherwise approved by the authorized officer, roads no longer needed for operations (1) shall be closed to normal vehicular traffic, (2) bridges and culverts shall be removed, (3) cross drains, dips, or water bars shall be constructed, and (4) the road surface shall be shaped to as near a natural contour as practicable and be stabilized.

(g) *Reclamation.* Upon exhaustion of the mineral deposit or at the earliest practicable time during operations, or within 1 year of the conclusion of operations, unless a longer time is allowed by the authorized officer, operator shall, where practicable, reclaim the surface disturbed in operations by taking such measures as will prevent or control onsite and off-site damage to the environment and forest surface resources including:

(1) Control of erosion and landslides;

(2) Control of water runoff;

(3) Isolation, removal or control of toxic materials;

(4) Reshaping and revegetation of disturbed areas, where reasonably practicable; and

(5) Rehabilitation of fisheries and wildlife habitat.

(h) Certification or other approval issued by State agencies or other Federal agencies of compliance with laws and regulations relating to mining operations will be accepted as compliance with similar or parallel requirements of these regulations.

§ 252.9 Maintenance during operations; public safety.

During all operations operator shall maintain his structures, equipment, and other facilities in a safe, neat and workmanlike manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced or otherwise identified to protect the public in accordance with Federal and State laws and regulations.

§ 252.10 Cessation of operations; removal of structures and equipment.

Unless otherwise agreed to by the authorized officer, operator shall remove within a reasonable time following cessation of operations all structures, equipment and other facilities and clean up the site of operations. Other than seasonally, where operations have ceased temporarily, an operator shall file a statement with the District Ranger which includes (1) verification of intent to maintain the structures, equipment and other facilities, (2) the expected reopening date, and (3) an estimate of extended duration of operations. A statement shall be filed every year in the event operations are not reactivated. Operator shall maintain the operating site, structures, equipment and other facilities in a neat and safe condition during nonoperating periods.

§ 252.11 Prevention and control of fire.

Operator shall comply with all applicable Federal and State fire laws and regulations and shall take all reasonable measures to prevent and suppress fires on the area of operations and shall require his employees, contractors and subcontractors to do likewise.

§ 252.12 Access.

An operator is entitled to access in connection with operations, but no road, trail, bridge, landing area for aircraft, or the like, shall be constructed or improved, nor shall any other means of access, including but not limited to off-road vehicles, be used until the operator has received approval of an operating plan in writing from the authorized officer when required by § 252.4(a). Proposals for construction, improvement or use of such access as part of a plan of operations shall include a description of the type and standard of the proposed means of access, a map showing the proposed route of access, and a description of the means of transportation to be used. Approval of the means of such access as part of a plan of operations shall specify the location of the access route, design standards, means of transportation, and other conditions reasonably necessary to protect the environment and forest surface resources, including measures to protect scenic values and to insure against erosion and water or air pollution.

§ 252.13 Bonds.

(a) Any operator required to file a plan of operations shall, when required by the authorized officer, furnish a bond conditioned upon compliance with § 252.8(g), prior to approval of such plan of operations. In lieu of a bond, the operator may deposit into a Federal depository, as directed by the Forest Service, and maintain therein, cash in an amount equal to the required dollar amount of the bond or negotiable securities of the United States having market value at the time of deposit of not less than the required dollar amount of the bond. A blanket bond covering nationwide or statewide operations may be furnished if the terms and conditions thereof are sufficient to comply with the regulations in this part.

(b) In determining the amount of the bond, consideration will be given to the estimated cost of stabilizing, rehabilitating, and reclaiming the area of operations.

(c) In the event that an approved plan of operations is modified in accordance with § 252.4 (c) and (e) of this part, the authorized officer will review the initial bond for adequacy and, if necessary, will adjust the bond to conform to the operations plan as modified.

(d) When reclamation has been completed in accordance with § 252.8(g), the authorized officer will notify the operator that performance under the bond has been completed: *Provided, however,* That when the Forest Service has accepted as completed any portion of the reclamation, the authorized officer shall notify the operator of such acceptance and reduce proportionally the amount of bond thereafter to be required with respect to the remaining reclamation.

§ 252.14 Appeals.

(a) Any operator aggrieved by a decision of the authorized officer in connection with the regulations in this part may file with the authorized officer a written statement setting forth in detail the respects in which the decision complained of is contrary to, or in conflict with, the facts, the law, or the regulations of the Secretary, or is otherwise in error. No such appeal will be considered unless it is filed with the authorized officer within thirty (30) days after the date of notification to the operator of the action or decision complained of. Upon receipt of appellant's statement, the authorized officer shall promptly prepare his own statement explaining his decision and the reasons therefor and forward the statements and record to his immediate superior for review and decision. The decision of the Regional Forester shall be the final administrative appeal decision.

(b) At the time appellant files his written statement of appeal he may request and shall be afforded an opportunity to present his views orally to the reviewing Forest Service officer.

(c) If the reviewing Forest Service officer considers the record inadequate to support a decision on the appeal, he may provide for the production of such additional evidence or information as may be appropriate or may remand the case with appropriate instructions for further action.

(d) The official files of the Forest Service relating to these appeals and any testimony and documents submitted by the parties on which the decision of the authorized officer was based constitute the record in the appeal. The authorized officer shall maintain the record under separate cover and shall certify that it is the record on which his decision was based at the time it is forwarded to his immediate superior for review. The Forest Service shall make the record available to the appellant upon request.

(e) On or before the expiration of forty-five (45) days after his receipt of the record the reviewing officer shall make his decision: *Provided, however,* That if more than forty-five (45) days are required for a decision after the record is received, the reviewing officer shall notify the parties to the appeal and specify the reason for delay. The decisions of reviewing officers shall include (1) a statement of facts, (2) conclusions, and (3) reasons upon which the conclusions are based.

(f) A decision of the authorized officer from which an appeal is taken shall not be automatically stayed by the filing of a statement of appeal. A request for a stay may accompany the statement of appeal or may be directed to the reviewing officer. The reviewing officer shall promptly rule on requests for stays. The decision of the Regional Forester on requests for stays shall constitute the final administrative appeal decision.

§ 252.15 Operations within national forest wilderness.

(a) The United States mining laws shall extend to each National Forest Wilderness for the period specified in the Wilderness Act and subsequent establishing legislation to the same extent they were applicable prior to the date the Wilderness was designated by Congress as a part of the National Wilderness Preservation System. Subject to valid existing rights, no person shall have any right or interest in or to any mineral deposits which may be discovered through prospecting or other information-gathering activity after the legal date on which the United States mining laws cease to apply to the specific Wilderness.

(b) Holders of unpatented mining claims validly established on any National Forest Wilderness prior to inclusion of such unit in the National Wilderness Preservation System shall be accorded the rights provided by the United States mining laws as then applicable to the National Forest land involved. Persons locating mining claims in any National Forest Wilderness on or after the date on which said Wilderness was included in the National Wilderness Preservation System shall be accorded the rights provided by the United States mining laws as applicable to the National Forest land involved and subject to provisions specified in the establishing legislation. Persons conducting operations as defined in § 252.3 in National Forest Wilderness shall comply with the regulations in this part. Operations shall be conducted so as to protect National Forest surface resources in accordance with the general purposes of maintaining the National Wilderness Preservation System unimpaired for future use and enjoyment as wilderness and to preserve its wilderness character, consistent with the use of the land for mineral location, exploration, development, drilling, and production and for transmission lines, water lines, telephone lines, and processing operations, including, where essential, the use of mechanized transport, aircraft or motorized equipment.

(c) Persons with valid mining claims wholly within National Forest Wilderness shall be permitted access to such surrounded claims by means consistent with the preservation of National Forest Wilderness which have been or are being customarily used with respect to other such claims surrounded by National Forest Wilderness. No operator shall construct roads across National Forest Wilderness unless authorized in writing by the Forest Supervisor in accordance with § 252.12.

(d) On all mining claims validly established on lands within the National Wilderness Preservation System, the operator shall take all reasonable measures to remove any structures, equipment and other facilities no longer needed for mining purposes in accordance with the provisions in § 252.10 and restore the surface in accordance with the requirements in § 252.8(g).

(e) The title to timber on patented claims validly established after the land was included within the National Wilderness Preservation System remains in the United States, subject to a right to cut and use timber for mining purposes. So much of the mature timber may be cut and used as is needed in the extraction, removal, and beneficiation of the mineral deposits, if needed timber is not otherwise reasonably available. The cutting shall comply with the requirements for sound principles of forest management as defined by the National Forest rules and regulations and set forth in stipulations to be included in the plan of operations, which as a minimum incorporate the following basic principles of forest management:

(1) Harvesting operations shall be so conducted as to minimize soil movement and damage from water runoff; and

(2) Slash shall be disposed of and other precautions shall be taken to minimize damage from forest insects, disease, and fire.

(f) The Chief, Forest Service, shall allow any activity, including prospecting for the purpose of gathering information about minerals in National Forest Wilderness except that any such activity for gathering information shall be carried on in a manner compatible with the preservation of the wilderness environment as specified in the plan of operations.

(78 Stat. 890) (16 U.S.C. 1131–1136))

PART 293—WILDERNESS-PRIMITIVE AREAS

3. The regulations of Part 293 were transferred from Part 251 on March 5, 1973 (38 FR 5851). The new Part 293 is further amended by revising §§ 293.13, 293.14 and 293.15. Regulations applicable to activities under the 1872 mining law in National Forest Wilderness now appear in Part 252 rather than Part 293.

Sections 293.13–293.15 are revised to read as follows:

§ 293.13 Access to valid occupancies.

Persons with valid occupancies wholly within National Forest Wilderness shall be permitted access to such surrounded occupancies by means consistent with the preservation of National Forest Wilderness which have been or are being customarily used with respect to other such occupancies surrounded by National Forest Wilderness. The Forest Service will, when appropriate, issue permits which shall prescribe the routes of travel to and from the surrounded occupancies, the mode of travel, and other conditions reasonably necessary to preserve the National Forest Wilderness.

§ 293.14 Mineral leases and mineral permits.

(a) All laws pertaining to mineral leasing shall extend to each National Forest Wilderness for the period specified in the Wilderness Act or subsequent establishing legislation to the same extent they were applicable prior to the date the Wilderness was designated by Congress as a part of the National Wilderness Preservation System. No person shall have any right or interest in or to any mineral deposits which may be discovered through prospecting or other information-gathering activity after the legal date on which the laws pertaining to mineral leasing cease to apply to the specific Wilderness, nor shall any person after such date have any preference in applying for a mineral lease, license, or permit.

(b) Mineral leases, permits, and licenses covering lands within National Forest Wilderness will contain reasonable stipulations for the protection of the wilderness character of the land consistent with the use of the land for purposes for which they are leased, permitted, or licensed. The Chief, Forest Service, shall specify the conditions to be included in such stipulations.

(c) Permits shall not be issued for the removal of mineral materials commonly known as "common varieties" under the Minerals Act of July 31, 1947, as amended and supplemented (30 U.S.C. 601–604).

§ 293.15 Gathering Information about Resources other than Minerals.

(a) The Chief, Forest Service, shall allow any activity, for the purpose of gathering information about resources, other than minerals, in National Forest Wilderness, except that any such activity for gathering information shall be carried on in a manner compatible with the preservation of the wilderness environment. Prospecting for minerals or any activity for the purpose of gathering information about minerals in National Forest Wilderness is subject to the regulations in Part 252 of this title.

(b) No overland motor vehicle or other form of mechanical overland transport may be used in connection with any activity for the purpose of gathering information about resources, other than minerals, except as authorized by the Chief, Forest Service.

(c) Any person desiring to use motorized equipment, to land aircraft, or to make substantial excavations for the purpose of gathering information about resources, other than minerals, shall apply in writing to the Office of the Forest Supervisor or District Ranger having jurisdiction over the land involved. Excavations shall be considered "substantial" which singularly or collectively exceed 200 cubic feet within any area which can be bounded by a rectangle containing 20 surface acres. Such use or excavation may be authorized by a permit issued by the Forest Service. Such permits may provide for the protection of National Forest resources, including wilderness values, protection of the public, and restoration of disturbed areas, including the posting of performance bonds.

(d) Prospecting for water resources and the establishment of new reservoirs, water-conservation works, power projects, transmission lines, and other facilities needed in the public interest and the subsequent maintenance of such facilities, all pursuant to section (4)(d) (4)(1) of the Wilderness Act, will be permitted when and as authorized by the President.

(30 Stat. 35, as amended (16 U.S.C. 551); 78 Stat. 890 (16 U.S.C. 1131–1136).

PAUL A. VANDER MYDE,
Deputy Assistant Secretary for Conservation, Research and Education.

AUGUST 23, 1974.

[FR Doc.74-19865 Filed 8-27-74;8:45 am]

GPO 879-771

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[43 CFR Part 3800]

SURFACE MANAGEMENT OF PUBLIC LAND UNDER U.S. MINING LAWS

Proposed Procedures to Minimize Adverse Environmental Impacts

This proposed rule-making sets forth rules and procedures to minimize adverse environmental impacts on the surface resources of public domain and other lands from operations authorized by the United States mining laws (30 U.S.C. 22–54). The regulations cover only actions which cause significant surface disturbance. In addition, the proposed rules would better facilitate multiple-use management. They also insure a greater degree of safety for the various public land user groups.

The proposed rules are designed to insure consistency with the spirit and intent of (a) The Mining and Minerals Policy Act of 1970 (30 U.S.C. 21a); (b) The National Environmental Policy Act of 1969 (42 U.S.C. 4321–4347); (c) Executive Order No. 11514 (35 FR 4247 (1970) relating to protection and enhancement of environmental quality; (d) Executive Order No. 11593 (36 FR 8921 (1971) relating to protection and enhancement of the cultural environment; (e) Executive Order No. 11752 (38 FR 34793 (1973) relating to prevention, control and abatement of environmental pollution of Federal facilities; and (f) Sections 4–7 of the Act of July 23, 1955 (30 U.S.C. 612–615), providing for multiple-use of the surface of mining claims on the public lands. They are also designed to implement section 302(b) of the Federal Land Policy and Management Act of 1976 (Pub. L. 94–579; 90 Stat. 2743; 43 U.S.C. 1701) which requires that the Secretary take any action necessary to prevent unnecessary or undue degredation of the public lands. They are issued pursuant to section 2319 of the Revised Statutes (30 U.S.C. 22) which provides that the exploration, location, and purchase of valuable mineral deposits shall be "under regulations prescribed by law," and section 2478 of the Revised Stitutes, as amended.

The rules would add a new subpart (3809) to the regulations to provide for surface management.

It is recognized that NEPA did not abrogate the Secretary's mandate under the Mining Law of 1872, and that without these proposed regulations, prospecting, exploration, and mining, which have non-discretionary authorization under the Mining Law of 1872, will continue with resultant impacts on the environment.

The proposed regulations do not authorize or commit the Federal Government to a course of action leading to disturbance of the environment. The proposed rules merely establish procedures for administering the non-discretionary requirements of existing law and mitigating impacts therefrom in keeping with the policy of the United States as expressed in the Mining and Minerals Policy Act of 1970 and the National Environmental Policy Act of 1969. The proposed rules also establish procedures for compliance with the non-discretionary requirements of the Endangered Species Act of 1973, the National Historic Sites Act of 1935, and the American Antiquities Act of 1906.

It is hereby determined that the publication of this proposed rulemaking is not a major Federal action significantly affecting the quality of the human environment and that no detailed statement pursuant to section 102(2)(c) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)9c) is required. An environmental analysis will be prepared on individual or groups of related actions where significant impacts on the quality of the human environment are identified a statement pursuant to section 102(2)(c) of the National Environmental Policy Act of 1969 will be prepared.

In accordance with the requirements of section 310 of the Federal Land Policy and Management Act of 1976 in rulemaking, interested parties may submit written comments, suggestions, or objections with respect to the proposed rules to the Direct (210), Bureau of Land Management, Washington, D.C. 20240 on or before January 5, 1977.

Copies of comments, suggestions, or objections made pursuant to the notice will be available for public inspection in the Division of Legislation and Regulatory Management, Bureau of Land Management, Room 5555, Interior Building, Washington, D.C. during regular business hours (7:45 a.m.–4:15 p.m.).

The Department of the Interior has determined that this document does not contain a major proposal requiring preparation of an Inflation Impact Statement under Executive Order 11821 and OMB Circular A–107.

Chapter II of Title 43 of the Code of Federal Regulations is amended as follows:

1. Part 3800 is added to read:

PART 3800—MINING CLAIMS UNDER THE GENERAL MINING LAWS:

GENERAL

Subpart 3809—Surface Management

Sec.

3809.0–1 Purpose.
3809.0–2 Objectives.
3809.0–3 Authority.
3809.0–4 Responsibilities.
3809.0–5 Definitions.
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3809.1 Notice of intent.
3809.1–1 Filing of Notice of intent.
3809.1–2 Contents of Notice of intent.
3809.1–3 Action on Notice.
3809.2 Plan of Operations.
3809.2–1 When Plan of operations required.
3809.2–2 When Plan not required.
3809.2–3 Contents of Plan.
3809.2–4 Plan approval.
3809.2–5 Modification of Plan.
3809.2–6 Existing operations.
3809.2–7 Bond requirements.
3809.3 Environmental protection.
3809.3–1 Technical examination/environmental analysis.
3809.3–2 Requirements for surface protection.
3809.3–3 Certification by other agencies.
3809.4 General provisions.
3809.4–1 Suspension of operations.
3809.4–2 Noncompliance.
3809.4–3 Access.
3809.4–4 Multiple-use conflicts.
3809.4–5 Fire prevention and control.
3809.4–6 Maintenance and public safety.
3809.4–7 Inspection.
3809.4–8 Notice of suspension of operations.
3809.5 Cessation of operations.
3809.6 Appeals.
3809.7 Public availability of information.

GENERAL

Subpart 3809—Surface Management

§ 3809.0–1 Purpose.

The purpose of the rules is to set procedures to minimize adverse environmental impacts on the surface resources of public lands from operations authorized by the United States mining laws (30 U.S.C. 22–54). The regulations cover only those actions which cause significant surface disturbance.

§ 3809.0–2 Objectives.

The objectives of these regulations are to:

(a) Allow and not unduly hinder location, entry, and operations pursuant to the United States mining laws, and

(b) Insure maximum consistency with the spirit and intent of the Mining and Minerals Policy Act of 1970, the National Environmental Policy Act of 1969, the Act of July 23, 1955, Executive Orders 11593, 11514, and 11752.

§ 3809.0–3 Authority.

These regulations are issued pursuant to the authority vested in the Secretary of the Interior by the General Mining Law (30 U.S.C. 22–54); sections 4–7 of the Act of July 23, 1955 (30 U.S.C. 612–615) providing for multiple use of the public lands; 43 U.S.C. 2 and 1201 relating to the general authority of the Secretary; the National Historic Preservation Act of 1966 (16 U.S.C. 470); the Historic Sites Act of 1935 (16 U.S.C. 461); Endangered Species Act of 1973 (16 U.S.C. 1531–1543); sections 3 and 5 of the Alaska Public Sales Act of August 30, 8921 (1971) relating to protection and enhancement of the cultural environment; Executive Order No. 11514 (35 FR 4247 (1970)), relating to protection and enhancement of the environment; Executive Order No. 11752 (38 FR 34793 (1973)) relating to prevention, control and abatement of environmental pollution at Federal facilities; and sections 302(b) and 310 of the Federal Land Policy and Management Act of 1976 (Pub. L. 94–579; 90 Stat. 2743; 43 U.S.C. 1701), requiring the Secretary to take action, by regulation, to prevent unnecessary or undue degradation of the public lands and carry out the purposes of the Federal Land Policy and Management Act.

§ 3809.0–4 Responsibilities.

(a) *Bureau of Land Mangement* is responsible for the administration of these regulations as to (1) public domain lands

and other lands, except where such lands are included in paragraphs (b) or (c) of this section, and (ii) lands where the surface has been patented and the locatable minerals have been reserved by the United States.

(b) *U.S. Forest Service* is responsible for administration of similar regulations in 36 CFR 252 as to National Forest lands.

(c) *Other surface management agencies* are responsible for administration of these regulations as to Public Domain Lands, the surface of which is managed by those agencies; except that mining operations conducted on land within any area of the National Park System shall be subject to regulations issued by the National Park Service in Title 36 of the Code of Federal Regulations pursuant to section 2 of the Act of September 28, 1976 (16 U.S.C. 1902).

§ 3809.0–5 Definitions.

As used in this subpart:

(a) "Mining Operations" means all functions, work, facilities and activities in connection with prospecting, exploration, surveying, development, mining or processing of mineral resources locatable under the United States mining laws and all uses reasonably incident thereto, including roads and other means of access on lands subject to the regulations in this subpart, regardless of whether the operations take place on or off unpatented mining claims.

(b) "Exploration" or "prospecting" means the search for minerals, by geological, geophysical, geochemical or other techniques, including, but not limited to, sampling, drilling, or any surface or underground works needed to determine the type, extent, or quantity of minerals present.

(c) "Operator" means a person or his successor in interest conducting or proposing to conduct mining operations.

(d) "Person" means any individual, partnership, corporation, association, or other legal entity.

(e) "Mining claim" means any unpatented mining claim, unpatented millsite or tunnel site authorized by the United States mining laws of May 10, 1872 (30 U.S.C. 22, et seq.).

(f) "Significant disturbance" means any disturbance to the environment other than casual use as determined by the authorized officer.

(g) "Casual use" means activities that involve practices which do not ordinarily lead to any appreciable disturbance or damage to the environment and improvements. For example, activities are considered "casual use" if they do not involve cutting of vegetation, use of heavy equipment or explosives, or do not involve use of motorized vehicles. However, use of motorized vehicles over established and open roads, as defined in 43 CFR 6290.0–5, is considered "casual use" so long as the vehicles conform to the operating regulations and vehicle standards contained in 43 CFR 6291.1 and 6293. (Also see § 3809.2–2 (a), (b) and (c).

(h) "Reclamation" means the process of returning affected lands to a stable condition and form consistent with their premining productivity or other approved post-mining land use.

(i) "Bureau" means the Bureau of Land Management.

(j) "Authorized officer" means any employee of the Bureau of Land Management to whom has been delegated the authority to perform the duties described in this part.

(k) "Environment" means surface and subsurface resources, both tangible and intangible including air, water, scenic, cultural, vegetative, soil, wildlife, and fish resources.

(l) "Proper BLM office" means the Bureau of Land Management office having jurisdiction over the lands subject to these regulations.

(m) "Plan of Operations" means a detailed plan submitted to the authorized officer before operations commence showing the location and type of work to be conducted, environmental protection procedures, roads, and reclamation procedures to be followed.

(n) "Contemporaneously as practicable" means with respect to reclamation of mineral or otherwise disturbed areas, the commencement, conduct and completion of reclamation activity as soon after disturbance as possible, without undue physical interference with ongoing operations, leaving a minimum of land unreclaimed, consistent with the requirements for surface protection set forth in this subpart.

§ 3809.0–6 Policy.

It is the policy of this Department to encourage the development of the mineral resources under its jurisdiction where mining operations are authorized. Under the 1872 mining law, prospectors, locators, claimants and miners have a statutory right consistent with Departmental regulations, to go upon the open (unappropriated and unreserved) public domain lands for the purposes of geological reconnaissance, mineral prospecting, exploration, development and production. Departmental statutory responsibilities and the public interest require that mining operations pursuant to the 1872 mining law include adequate and reasonable measures to avoid, minimize, or control damage to the environment and to avoid, minimize, or control hazards to the public health and safety. The regulations in this subpart prescribe procedures to that end.

§ 3809.0–7 Scope.

(a) These regulations apply to mining operations conducted under the United States mining laws (30 U.S.C. 22–54), as they effect surface resources on all "Public Domain lands" and "other lands" (See 43 CFR 3000), whether managed by the Bureau or by another surface management agency, except those within units of the National Park System. These regulations also apply to lands where the surface has been patented and the locatable mineral rights have been reserved by the United States. "Other lands" include, but are not limited to, lands on which the following take place:

(1) Mining operations under a right of entry granted by section 9 of the Act of December 29, 1916 (39 Stat. 864; 43 U.S.C. 299), commonly referred to as the Stock-Raising Homestead Act;

(2) Mining operations on lands within stock driveway withdrawals pursuant to the Act of January 29, 1929 (45 Stat. 1144; 43 U.S.C. 300);

(3) Mining operations on lands under the general mining law in reclamation withdrawals pursuant to the Act of April 23, 1932 (47 Stat. 136; 43 U.S.C. 154);

(4) Mining operations conducted on the revested Oregon and California Railroad and Reconveyed Coos Bay Wagon Road Grant Lands conducted pursuant to the Act of April 8, 1949 (62 Stat. 162); or

(5) Mining Operations under the provisions of the Alaska Public Sales Act of August 30, 1949 (63 Stat. 679, 48 U.S.C. 364a–364e).

(b) Mining operations conducted on National Forest System lands under the jurisdiction of the Department of Agriculture pursuant to the United States Mining laws, and areas of the National Forest lands covered by a Special Act of Congress (16 U.S.C. 482a–482q) are subject to the regulations of the U.S. Forest Service, 36 CFR Part 252.

(c) In cases of conflict between this subpart and Part 3820, pertaining to lands subject to special mining laws, the more stringent rule shall apply.

(d) Mining operations conducted on units within the National Park System shall be subject to such regulations as are issued by the National Park Service in Title 36 of the Code of Federal Regulations under section 2 of the Act of September 28, 1976 (16 U.S.C. 1902).

§ 3809.0–8 Cross references.

(a) Regulation of off-road vehicles 43 CFR Part 8290.

(b) Trespass actions 43 CFR Part 9230, 43 CFR Part 3602.

(c) Preservation of American antiquities including archaeological sites, ruins, and historic monuments 43 CFR Part 3.

(d) U.S. Forest Service regulations on Surface Management requirements 36 CFR Part 252.

(e) Areas subject to special mining laws 43 CFR Part 3820.

(f) Procedures for the protection of historic and cultural properties 36 CFR Part 800.

§ 3809.1 Notice of intent.

§ 3809.1–1 Filing of notice of intent.

(a) No mining operations which might cause significant disturbance of surface resources shall be conducted or initiated on lands subject to these regulations until the operator has filed a Notice of intent in the proper BLM office and action has been taken under § 3809.1–3. The authorized officer shall make the final determination concerning mining operations which might cause significant

disturbance of surface resources. A Plan of Operations may be filed in lieu of the Notice.

(b) When the Notice concerns lands the surface of which is managed by another agency, the authorized officer shall immediately upon receipt of the Notice forward it to that agency for comment. Comments of the other surface management agency must be returned to the authorized officer within 15 days of receipt thereof by that agency. Comments not received by the authorized officer in time to permit notification of the operator within the time prescribed by the regulations in this subpart may not be considered by the authorized officer.

§ 3809.1–2 Contents of Notice of Intent.

(a) No specific form is required.

(b) Notice will include, if not already on file in the proper BLM office, the following information:

(1) The name and legal mailing address of each operator or person intending to enter the public domain;

(2) If surveyed, a legal description of the area of operations by subdivision, section, township, range, and meridian. If unsurveyed, a description of the area of operations by legal subdivision in accordance with an approved protraction diagram, or, if no such diagram exists, by metes and bounds, giving courses and distances between successive angle points, and connected by course and distances to an official corner of the public land surveys;

(3) A map or maps with a scale of not less than 1"–1 mile delineating the area of mining operations and showing the topography of the land, drainage patterns, present roads and trails location, proposed road and trail locations and other surface areas to be disturbed by mining operations;

(4) A statement describing the nature of the proposed mining operation, the method of transport and the measures proposed to protect the environment and improvements;

(5) The approximate dates of commencement and termination of operations; and

(6) The serial number(s) assigned to the claim or claims by the authorized officer upon filing the official copy of the notice or certificate of location of the mining claim(s), mill site(s) or tunnel site(s) pursuant to the Federal Land Policy and Management Act of 1976 (Pub. L. 94–579; 90 Stat. 2743; 43 U.S.C. 1701) and 43 CFR Subpart 3833.

§ 3809.1–3 Action on Notice.

(a) After a Notice of Intent has been filed, the authorized officer will, within 15 working days or, in the case of a Notice concerning lands the surface of which is managed by another agency, 30 working days of receipt thereof, notify the operator whether a Plan of Operations is required.

(b) Failure of the authorized officer to notify the operator within 15 working days (30 working days where the surface of the lands involved are managed by another agency) shall constitute notice that a Plan of Operations is not required by the operator for only those mining operations described in the Notice of Intent. (c) Mining operations that might cause significant disturbance of surface resources shall not begin until a Notice has been acted on or 15 working days (30 working days in the case of lands the surface of which is managed by another agency) after the authorized officer is notified.

§ 3809.2–1 Plan of Operations.

§ 3809.2–1 When Plan of Operations required.

(a) Prior to commencing mining operations which will cause significant surface resource disturbance the operator will have an approved Plan of Operations.

(b) Any operator who intends to construct or improve roads, trails, bridges, landing area for aircraft, (or the like), or other facilities for any other means of access, is required to have an approved Plan of Operations.

(c) No operator shall construct or place any structure on a mining claim without first obtaining an approved Plan of Operations.

§ 3809.2–2 When Plan not required.

A Plan of Operations shall not be required for:

(a) Individuals desiring to search for and occasionally remove small mineral samples or specimens such as provided for in 43 CFR 6010.2 (this allows only hobby or recreational scale mineral collecting and does not authorize use of motorized vehicles),

(b) Prospecting and sampling which will not cause significant surface resource disturbance and will not involve removal of more than a reasonable amount of the mineral deposit for analysis and study,

(c) Marking and monumenting a mining claim and

(d) Subsurface mining operations which will not cause significant surface resource disturbance.

§ 3809.2–3 Contents of Plan.

(a) No special form shall be required in connection with the submission of a Plan of Operations.

(b) The Plan of Operations submitted by the operator shall include, if not already on file in the proper BLM office, the following information:

(1) The name and legal mailing address of each operator, person or agent who proposes to conduct surface disturbing mining operations. Any change of operator or change in legal mailing address of the operator shall be reported promptly to the authorized officer;

(2) A map, preferably a topographic map, with a scale of not less than 1"=1 mile, showing drainage patterns, present road and trail locations, proposed road and trial locations, and location and size of areas where surface resources will be disturbed;

(3) Information sufficient to describe or identify either the entire operation proposed (See paragraph (c) of this section) or reasonably foreseeable operations (See § 3809.2–5) and how they would be conducted, i.e., drilling, shaft sinking, trenching, blasting, etc.;

(4) The type and standard of existing and proposed roads or access routes, the means of transportation used or to be used as set forth in § 3809.4–4, and the period during which the proposed activity will take place;

(5) If surveyed, a legal description of the area of operations, i.e., section, township, range, meridian, and State. If unsurveyed, a description of the area of operations by legal subdivision in accordance with an approved protraction diagram, or, if no such diagram exists, by metes and bounds, giving courses and distances between successive angle points, and connected by courses and distances to an official corner of the public land surveys;

(6) Measures to be taken to meet the requirements for environmental protection in § 3808.3; and

(7) The serial number(s) assigned to the claim or claims by the authorized officer upon filing in the proper BLM office a copy of the official notice or certificate of location of the mining claim(s), mill site(s) or tunnel site(s) pursuant to the Federal Land Policy and Management Act of 1976 (Pub. L. 94–579; 90 Stat. 2743; 43 U.S.C. 1701) and 43 CFR Subpart 3833.

(c) The Plan of Operations submitted by the operator shall cover the entire operation for the full estimated period of activity except as provided for in § 3809.2–5.

§ 3809.2–4 Plan approval.

(a) In those instances when a Plan of Operations is required, mining operations shall be conducted in accordance with an approved Plan of Operations and the regulations in this subpart.

(b) Within 30 working days of receipt of the Plan of Operations, the authorized officer shall review the proposal and:

(1) Notify the operator in writing that the Plan of Operations is approved, or rejected and the reasons therefore; or

(2) Notify the operator in writing that the proposed operations will not cause significant surface disturbance and thus will not require a Plan of Operations; or

(3) Notify the operator in writing of any changes in, or additions to, the Plan of Operations deemed necessary to meet the purpose of the regulations in this subpart; or

(4) Notify the operator in writing that the plan is being reviewed, but that more time, not to exceed an additional 60 working days, is necessary to complete such review, setting forth the reasons why additional time is needed. Periods during which the area of operations is inaccessible for inspection due to climatic conditions, fire hazards, or other physical conditions or legal impediments, shall not be included when computing the 60 day period.

(c) If the authorized officer does not act on the Plan of Operations within the 30 day period or the 60 day extension provided in paragraph (b) of this section, the plan will be considered approved.

(d) Pending final approval of the Plan of Operations, the authorized officer will approve such operations as may be necessary for timely compliance with requirements of Federal and State laws. Such operations shall be conducted so as to minimize environmental impacts as prescribed by the authorized officer in accordance with the standards contained in § 3809.3–2.

(e) *Cultural Resources.* A Plan of Operations will not be approved, except as to operations conducted in accordance with paragraph (d) of this section, until a cultural resources inventory of the area to be disturbed has been made by the authorized officer under the provisions of the National Historic Preservation Act of 1966 (80 Stat. 915, 16 U.S.C. 470) and the Antiquities Act of 1906 (34 Stat. 1225; 431–433). An appropriate level of cultural resources inventory consists of a review of existing cultural resource data. If the data reviewed reveals the potential existence of cultural resources in the area or that the data available is not sufficient to make an accurate assessment of the potential existence of the cultural resources, a field sampling of the area to be disturbed shall be conducted. The cultural resources inventory shall be completed within the time allowed by the regulations in this subpart for approval of the Plan. If National Register or eligible National Register cultural resources might be affected, no actions will be authorized until compliance with section 106 of the National Historic Preservation Act and section 2(b) of Executive Order 11593 has been accomplished. Should it be determined that significant cultural resources exist, no operations will be permitted until appropriate avoidance, salvage, or other mitigation measures are accomplished by the Government. Nothing herein shall be interpreted as requiring the operator to do or to pay for a cultural resources inventory.

§ 3809.2–5 Modification of Plan.

(a) If the development of a plan for an entire operation is not possible, the operator shall file an initial plan setting forth his proposed operation to the degree reasonably foreseeable at that time. Thereafter, he shall file a supplemental plan or plans prior to undertaking any significant surface disturbance not covered by the initial plan.

(b) At any time during operations under an approved Plan of Operations, the authorized officer may require the operator to furnish a modification of the plan detailing the means of minimizing significant disturbance of the surface resources that was unforeseen at the time of filing the Plan of Operations. If the operator does not furnish a modification within a time deemed reasonable by the authorized officer, appropriate action, including suspension of operations, will be initiated to assure compliance with these regulations and protection of the environment.

(1) The authorized officer's request for a modification of a Plan of Operation must include a statement setting forth in detail the facts and reasons why it is believed such a modification is required.

(2) Operations may continue in accordance with the approved plan until either a modified or supplemental plan(s) is approved. If the authorized officer determines that operations, which were not covered by an initial plan or were unforeseen at the time of filing of an approved plan, are unnecessarily or unreasonably causing irreparable damage to the environment, he shall order a suspension of only the operations that caused the damage.

(c) A supplemental Plan of Operations or a modification of an approved Plan of Operations shall be subject to approval by the authorized officer in the same manner as the initial Plan of Operations.

§ 3809.2–6 Existing operations.

(a) Persons conducting mining operations on the effective date of these regulations, who would be required to submit a Plan of Operations under § 3809.2–1 may continue operations but shall within 90 days thereafter submit a Plan of Operations. Upon a showing of good cause, the authorized officer will grant an extension of time for submission of a Plan of Operations, not to exceed an additional 180 days.

(b) Operations may continue according to the submitted plan during its review. If the authorized officer determines that the operations are unnecessarily or unreasonably causing irreparable damage to the environment, he shall advise the operator of those measures needed to avoid such damage. If such immediate damage cannot be avoided, the authorized officer shall order the suspension of only the operations that caused the damage.

(c) Upon approval of a Plan of Operations, mining operations shall be conducted in accordance with the approved plan.

§ 3809.2–7 Bond requirements.

(a) Any operator required to file a Plan of Operations shall furnish a bond prior to the commencement of such operations.

(b) In lieu of a bond, the operator may deposit and maintain in a Federal depository, as directed by the authorized officer, cash in an amount equal to the required dollar amount of the bond or negotiable securities of the United States having market value at the time of deposit of not less than the required dollar amount of the bond.

(c) A blanket bond covering nationwide or statewide operations may be furnished if the terms and conditions as determined by the authorized officer are sufficient to comply with the regulations in this part. The minimum statewide bond shall be $100,000. The minimum nationwide bond shall be $300,000.

(d) In determining the amount of the bond, the authorized officer will consider the estimated cost of stabilizing, rehabilitating, and reclaiming all areas disturbed by the operations consistent with § 3809.3–2(h).

(e) In the event that an approved Plan of Operations is modified in accordance with § 3809.2–5, the authorized officer will review the initial bond for adequacy and, if necessary, will adjust the amount of bond required to conform to the Plan of Operations, as modified.

(f) When a mining claim is patented, the authorized officer shall release the operator from any performance bond and Plan of Operations.

(g) (1) When all or any portion of the reclamation has been completed in accordance with § 3809.3–2 (g) and (h), the operator will notify the authorized officer, and the authorized officer shall promptly make a joint inspection with the operator. After inspection of the operations, the authorized officer will notify the operator whether the performance under the Plan of Operations is accepted. When the authorized officer has accepted as completed any portion of the reclamation, he shall reduce proportionally the amount of bond thereafter to be required with respect to the remaining reclamation; *Provided, however*, That the operator will not be released from responsibility and liability under the bond for the amount necessary for revegetation of each planting area for a minimum period of at least five years, not to exceed 10 years, after the first vegetative planting, as determined by the authorized officer.

(2) When during such period of extended liability, the authorized officer determines that because of natural conditions the potential for successful vegetation is uncertain, he may further extend liability of the operator for a period of up to five years beyond the period initially established, if the financial liability that would be incurred by the operator as a result is reasonably commensurate with the probability of successful revegetation.

(3) When during the minimum five year period of extended liability, the authorized officer determines that natural conditions favor rapid revegetation and that revegetation is likely to occur before the expiration of such minimum period, he may release the operator from the extended liability under the bond for revegetation of the planting area.

§ 3809.3 Environmental protection.

§ 3809.3–1 Technical examination/environmental analysis.

(a) When a Plan of Operations or significant modification is filed, the authorized officer shall make a technical examination/environmental analysis. The technical examination shall identify the resources and land uses within the general area. The environmental analysis shall identify the impact of the proposed mining operations upon the living and non-living components of the environment. Following completion of the technical examination/environmental analysis, the authorized officer shall recommend stipulations to be included in the Plan of Operations for the protection of the environment and for reconciliation of conflicts between identified uses and the proposed mining Operations.

(b) The authorized officer may solicit comments and suggestions from the public and governmental agencies as part of the preparation of the technical exami-

nation. Comments will be solicited immediately after the filing of a Plan of Operations or significant modification.

(c) If the surface resources of the lands involved are administered by an agency other than the Bureau, that agency will be responsible for the technical examination. In cases of mixed administration, the agencies will make a joint technical examination.

§ 3809.3–2 Requirements for surface protection.

All operations shall be conducted so as to minimize adverse environmental impacts, including, but not limited to, the following requirements:

(a) *Air Quality.* The operators shall comply with applicable Federal and State air quality standards, including the requirements of the Clean Air Act (42 U.S.C. 1857 et. seq.);

(b) *Water Quality.* The operator shall comply with applicable Federal and State water quality standards, including regulations issued pursuant to the Federal Water Pollution Control Act (33 U.S.C. 1151 et seq.). These regulations include:

(1) Effluent guidelines and standards for mineral mining and processing point source category (40 CFR 436; 40 FR 48652 and 48665 (1975)), and

(2) Effluent guidelines for ore mining (40 CFR 440, 40 FR 51722 (1975));

(c) *Solid Wastes.* The operator shall comply with applicable Federal and State standards for the disposal and treatment of solid wastes. All garbage, refuse, or waste shall either be removed from the affected lands or disposed of or treated to minimize, so far as is practicable, its impact on the environment and the surface resources. All tailings, waste rock, trash, deleterious materials or substances and other waste produced by operations shall be deployed, arranged, disposed of or treated to minimize adverse impact upon the environment and surface resources;

(d) *Visual Resources.* The operator shall, to the extent practicable, harmonize operations with the visual resources through such measures as the design and location of operating facilities, including roads and other means of access, vegetative screening of operations, and construction of structures and improvements to blend with the landscape;

(e) *Fisheries, Wildlife and Plant Habitat.* In addition to compliance with water quality and solid waste disposal standards required by this section, the operator shall take such action as may be needed to minimize, control or prevent adverse impact upon plants, fish, and wildlife, especially threatened or endangered species, and their habitat which may be affected by the operations;

(f) *Cultural Resources.* (1) The operator shall not injure, alter, destroy, or collect any site, structure, object, or other value of historical, archaeological, paleontological, or other cultural scientific importance.

(2) The operator shall immediately bring to the attention of the authorized officer any cultural and/or scientific resource that might be altered or destroyed by his operation and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer will evaluate the discoveries brought to his attention, and will determine within five working days what action will be taken with respect to such discoveries.

(3) The responsibility for, and cost of investigations and salvage of such values that are discovered during operations will be that of (i) the operator if discovered during the conduct of extraction or processing of mineral resources or (ii) the Government if discovered during any other type of mining operation.

(4) Failure to comply with this stipulation may constitute a violation of the Antiquities Act (16 U.S.C. 431–433).

(g) *Roads.* Roads that are constructed by the operator shall be constructed and maintained so as to assure adequate drainage and to minimize or eliminate damage to soil, water, and other resource values. Unless otherwise approved by the authorized officer, roads no longer needed for operations shall be closed to normal vehicular traffic, bridges and culverts shall be removed, cross drains, dips or water bars shall be constructed and the road surface shall be shaped to as near a natural contour as practicable, be stabilized, and revegetated as required in the Plan of Operations;

(h) *Reclamation.* (1) Unless a longer time is allowed by the authorized officer, the operator will perform reclamation of the surface pursuant to his approved plan as contemporaneously as practicable with operations.

(2) Reclamation will include: (i) Control of erosion and landslides, (ii) control of water runoff, (iii) isolation, removal or control of toxic materials, (iv) reshaping and revegetation of disturbed areas so as to provide a diverse vegetative cover, native to the area and capable of self-regeneration, at least equal in density and permanence to the natural vegetation, and (v) rehabilitation of fisheries and wildlife habitat; and

(i) *Protection of survey monuments.* The operator shall protect all survey monuments, witness corners, reference monuments and bearing trees against destruction, obliteration, or damage from mining operations. If any monuments, corners or accessories are destroyed, obliterated, or damaged by such mining operations, the operator shall hire the appropriate county surveyor or a registered land surveyor to reestablish or restore at the same location the monuments, corners, or accessories using surveying procedures in accordance with the "Manual of Instructions for the Survey of the Public Lands of the United States" and shall record such survey in appropriate county records. The authorized officer may prescribe in writing additional requirements for the protection of monuments, corners, and bearing trees.

§ 3809.3–3 Certification by other agencies.

Certification or other approval issued by State agencies or other Federal agencies of compliance with laws and regulations relating to mining operations will be generally accepted as compliance with similar or parallel requirements of these regulations. Such certification will not relieve the surface management agency of its responsibilities.

§ 3809.4 General provisions.

§ 3809.4–1 Suspension of operations.

If mining operations are ordered suspended to avoid irreparable damage to the environment in accordance with § 3809.2–5(b) and § 3809.2–6(b), the authorized officer will work promptly with the operator to determine those measures required to minimize or prevent damage and end the suspension.

§ 3809.4–2 Noncompliance.

(a) Mining operations which cause significant disturbance and that are undertaken either before the operator has filed a Notice of Intent and action taken under § 3809.1–3, or if required, without having an approved Plan of Operations or are continued after ordered suspended in accordance with §§ 3809.2–5(b), 3809.2–6(b) and paragraph (d) of this section, will be considered a trespass against the United States. Trespassers will be liable for damages and be subject to prosecution for such unlawful acts. (See 43 CFR Part 9230).

(b) Whenever the authorized officer determines that an operator is failing or has failed to comply with the requirements of an approved Plan of Operations, or with the provisions of applicable regulations in this subpart, he shall serve a notice of noncompliance upon the operator by delivery in person to him or his authorized agent, or by certified mail addressed to his last known address.

(c) A notice of noncompliance shall specify in what respects the operator is failing or has failed to comply with the requirements of the Plan of Operations or the provisions of applicable regulations, and shall specify the actions which are in violation of the plan or regulations and the actions which must be taken to correct the noncompliance and the time limits, usually 30 days, within which corrective action must be taken.

(d) If the operator fails to take action in accordance with the notice of noncompliance, the authorized officer may order the forfeiture of all or a portion of the performance bond and shall order suspension of only those operations specified in the notice of noncompliance as not in compliance with the approved plan or the provisions of applicable regulations.

§ 3809.4–3 Access.

(a) An operator will be granted access to his mining operations consistent with provisions of the United States Mining Laws and Departmental regulations.

(b) Proposals for construction, improvement or use of such access as part of a Plan of Operations shall include a description of the type and standard of the proposed means of access, a map, preferably a topographic map, showing the proposed route of access, and a description of the means of transportation to be used.

(c) Approval of the means of such access as part of a Plan of Operations

shall specify the location of the access route, design standards, means of transportation, and other conditions necessary to protect the environment and surface resources, including measures to protect scenic values and to insure against erosion and water or air pollution.

(d) The operator shall permit free and unrestricted public access to lands subject to the regulations in this subpart for all lawful and proper purposes except in areas where such access would unduly interfere with authorized operations or would constitute a hazard to health and safety. Restrictions by the operator on use of public access will not be allowed without prior approval from the authorized officer.

§ 3809.4–4 Multiple-use conflicts.

In the event that uses under any lease, license, permit or other authorization, pursuant to the provisions of any other act, shall conflict, interfere with or endanger operations in plans approved under this subpart, the conflicts shall be reconciled, as much as practicable, by the authorized officer.

3809.4–5 Fire prevention and control.

The operator shall comply with all applicable Federal and State fire laws and regulations and shall take all reasonable measures to prevent and suppress fires in the area of mining operations.

3809.4–6 Maintenance and public safety.

During all mining operations, the operator shall maintain his structures, equipment, and other facilities in a safe and neat manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to protect the public in accordance with applicable Federal and State laws and regulations.

§ 3809.4–7 Inspection.

The authorized officer shall periodically inspect mining operations to determine if the operator is complying with the regulations in this subpart and the approved Plan of Operations.

§ 3809.4–8 Notice of suspension of operations.

(a) Except for seasonal suspension, the operator shall notify the authorized officer of any suspension of mining operations within 30 days of such suspension. This notice shall include:

(1) Verification of intent to maintain structures, equipment, and other facilities, and

(2) The expected reopening date. A notice shall be filed every year in the event operations are not reactivated.

(b) The operator shall maintain the operating site, structure and other facilities in a neat and safe condition during nonoperating periods.

(c) The operator shall comply with the Plan of Operations during nonoperating periods.

(d) The name and address of the operator shall be clearly posted and maintained in a prominent place within the limits of the area of mining operations during periods of nonoperation.

§ 3809.5 Cessation of operations.

The operator shall within one year following cessation of mining operations, remove all structures, equipment and other facilities and clean up the site of mining operations. Additional time may be granted by the authorized officer upon a showing of good cause by the operator.

§ 3809.6 Appeals.

(a) A person adversely affected by a decision of the authorized officer made pursuant to the provisions of this subpart shall have a right of appeal to the Board of Land Appeals, Office of Hearings and Appeals pursuant to 43 CFR Part 4.

(b) In any case involving lands under the jurisdiction of any agency other than the Department of the Interior, or an office of the Department of the Interior other than the Bureau, the officer rendering a decision shall designate the authorized officer of such agency as an adverse party on whom a copy of any notice of appeal and any statement of reasons, written arguments, or briefs must be served.

§ 3809.7 Public availability of information.

(a) Except as provided herein, all information and data submitted by the operator shall be available for examination by the public at the office of the authorized officer in accordance with the provisions of the Freedom of Information Act (F.O.I.A.).

(b) Information and data submitted by the operator and specifically identified as and containing trade secrets or confidential or privileged commercial or financial information will not be available for public examination as long as disclosure of the material is not required under the F.O.I.A.

(c) The determination concerning specific information which may be withheld from public examination will be made in accordance with the rules in 43 CFR Part 2.

(d) Plans of Operations submitted under § 3809.2 of this subpart will be made available for public inspection in the office of the authorized officer.

JACK HORTON,
Assistant Secretary of the Interior.

NOVEMBER 30, 1976.

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DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Part 3800

[Circular No. 2457]

Exploration and Mining, Wilderness Review Program

AGENCY: Bureau of Land Management, Interior.

ACTION: Interim final rulemaking.

SUMMARY: This interim final rulemaking provides for the management and protection of public lands under wilderness review. The Federal Land Policy and Management Act of 1976 requires that certain public lands be reviewed to determine their suitability for inclusion in the National Wilderness Preservation System. Mining operations may continue in wilderness study areas during the review in the same manner and degree as they were conducted on October 21, 1976, provided that no undue or unnecessary damage is being done to public lands and resources in wilderness study areas and that environmental protection is afforded. The intention of this rulemaking is to protect potential and identified wilderness study areas from the loss of wilderness suitability that might result from mining operations.

EFFECTIVE DATE: April 2, 1980.

ADDRESS: Any suggestions or inquiries should be addressed to: Director (520), Bureau of Land Management, 1800 C Street, N.W., Washington, D.C. 20240.

FOR FURTHER INFORMATION CONTACT:

Robert M. Anderson (202) 343-8537, or Robert C. Bruce (202) 343-8735.

SUPPLEMENTARY INFORMATION: Proposed rulemaking was published in the **Federal Register** on January 12, 1979 (43 FR 2623). Comments were invited for 60 days. Comments were received from 160 different sources, with 27 coming from companies with mining interests of one kind or another, 15 from mining groups and associations, 21 from environmental groups, 10 from State and local agencies, 5 from Federal agencies, 3 from attorneys and 78 from individuals. Also received was a petition commenting on the proposed rulemaking that had 289 signatures in addition to the signature of the individual who submitted the original comments. In addition, comments on the Bureau of Land Management's Interim Management Policy for Wilderness, the policy statement that relates to areas included in this rulemaking were considered in the preparation of the final rulemaking.

General Comments

The general comments on the proposed rulemaking were extremely varied, ranging from comments questioning the authority for issuing the proposed rulemaking to comments supporting the proposed rulemaking and urging that it be made stronger.

One area that drew several strong comments was the application of the proposed rulemaking to wilderness study areas and potential wilderness study areas. Many of the comments were of the opinion that the Federal Land Policy and Management Act did not give the Secretary of the Interior authority to impose restrictions on mining activities authorized by the Mining Law of 1872 until those lands had been identified as wilderness study areas. Some comments went further and indicated that even if an area was identified as a wilderness study area, the limitations that could be imposed were less than those contained in the proposed rulemaking.

Many of the comments indicated that the rulemaking would result in limiting mining activities on all 450 million acres of the public lands until such time as the wilderness inventory was completed. The Department of the Interior and the Bureau of Land Management do not believe this to be the case. At the outset of the wilderness inventory process, the Department of the Interior and the Bureau of Land Management recognized that not all of the public lands had wilderness characteristics and many millions of acres would be eliminated during the inventory process.

All of the public land states except Alaska have completed their initial wilderness inventory. The initial inventory covered approximately 175 million acres of public lands and unsurveyed islands. As a result of this initial inventory, approximately 46.4 million acres have been identified for intensive inventory, eliminating approximately 117 million acres in the public land States outside of Alaska from further consideration in the wilderness inventory process, thus removing them from the restrictions imposed by this interim final rulemaking. The intensive inventory process will further reduce the acreage that is included in the wilderness study areas and the amount of the public lands that are subject to this interim final rulemaking. The inventory process will proceed as rapidly as possible. However, until the inventory process is completed on September 30, 1980, the Secretary of the Interior has the responsibility imposed on him by the Federal Land Policy and Management Act to protect those public lands being inventoried for wilderness suitability from activities that may destroy their suitability for inclusion in the wilderness system. The interim management policy for wilderness and this interim final rulemaking are designed to give that protection to the lands under wilderness review.

Other comments felt strongly that the Secretary of the Interior should take steps to stop all activities that might damage or impair the wilderness characteristics of the public lands until the wilderness inventory process is completed. These comments stated that lands on which there are many mining operations, particularly activity in the desert or high mountain country, could never be restored, so that mining activity must be stopped. This group of comments wanted the proposed rulemaking strengthened significantly to afford the protection that they felt was necessary. The interim final rulemaking carries out the Congressional mandate contained in the Federal Land Policy and Management Act to protect lands that are being inventoried for wilderness characteristics, yet allows the continuance of certain activities specified by the Federal Land Policy and Management Act.

This interim final rulemaking addresses five different practical situations regarding public lands under wilderness review. First, it establishes the general standard that public lands under wilderness review must be managed so as not to impair their suitability for preservation as wilderness. This applies to all uses and activities except those specifically exempted from this standard by the provisions of the Federal Land Policy and Management Act.

Second, those mining uses that existed on October 21, 1976, may continue in the same manner and degree as on that date, even if the use would impair wilderness suitability.

Third, public lands under wilderness review may not be closed to appropriation under the mining laws in order to protect their wilderness character, and so are open to the location of mining claims.

Fourth, valid existing rights must be recognized.

Fifth, the public lands must be managed to prevent undue and unnecessary degradation of those public lands.

The interim final rulemaking will assist the Department of the Interior in its responsibility to ensure that, when the President makes his recommendations to Congress for areas to be included in the National

Wilderness Preservation System, each such wilderness study area satisfies the definition of wilderness contained in section 2(c) of the Wilderness Act. For practical purposes, it is essential that the public lands contained in a wilderness study area meet the definition at the time the Secretary of the Interior is scheduled to make his recommendations to the President. This is because the President might send his recommendations to the Congress immediately on receipt of the Secretary's recommendations, with the Congress acting quickly on those recommendations. For this reason, the interim final rulemaking requires that the lands be reclaimed from all impacts that impair the wilderness suitability of a wilderness study area by the time the Secretary of the Interior is scheduled to make his recommendations to the President.

Several comments suggested that a board of one type or another be substituted for the authorized officer as the decisionmaking authority on plans of operations. The suggestions as to the composition of the board varied with the interest group represented by the comment. Mining interests wanted mining specialists and environmental groups wanted environmental experts on the board. Since the Secretary of the Interior and those officials to whom he designates his responsibilities have the ultimate responsibility for protecting the wilderness characteristics of the lands under wilderness review, it is essential that they make the decision on plans of operations. The interim final rulemaking so provides.

Another concern expressed in the comments was that the final interim rulemaking and the interim management plan be implemented to cause the least possible interruption to the public use of the public lands under wilderness review. Every effort is being made to carry out the Congressionally mandated wilderness review in the least disruptive manner. As an example, the Department of the Interior is attempting to identify those lands with wilderness characteristics as rapidly as possible so that those lands not possessing wilderness characteristics can be returned to multiple use.

Many of the comments that were general in nature also applied to specific sections of the proposed rulemaking and will be discussed in that part of the preamble on specific comments.

Specific Comments

Purpose—Several comments were made on the purpose section. The most prevalent complaint raised in the comments concerned the use of the phrase "potential wilderness study areas". A few of the comments questioned the authority to include potential wilderness study areas. The interim final rulemaking has been amended to refer to "lands under wilderness review", because this phrase better describes the purposes of the rulemaking. Other comments on this section wanted additional language placed in the section that would broaden the purpose of the rulemaking to include the specific interest of the person making the comment. Except for the amendment just discussed, this section was not changed because it adequately describes the purpose of the interim final rulemaking.

Objectives—This section has also been changed as have later sections to remove the reference to "potential wilderness study areas". The change was in response to several comments. Several other comments on this section expressed the view that the objectives section went much further than needed. After a careful study of the rulemaking and its objectives, the language of paragraph (a) was shortened to contain only a very broad statement of objectives, removing some of the language of the paragraph that was too specific. Finally, this section was amended to delete the words "the spirit and intent of" when referring to consistency with the United States Mining Laws. As the comments pointed out, the rulemaking is to assure consistency with those laws and the amendment makes that clear.

Authority—The comments questioned the use of section 303 of the Federal Land Policy and Management Act as authority for this rulemaking and suggested its deletion. After studying the comments and the provisions of the Federal Land Policy and Management Act, it was determined that sections 302 and 603 are the basic authority for the issuance of the interim final rulemaking and reference to section 303 has been deleted. Another comment wanted section 201 added as authority for the rulemaking. While section 201 is part of the authority for conducting the inventories and carrying out the land use planning responsibilities, it is not the basis of the authority to control surface mining activity, the purpose of this interim final rulemaking. Thus, the recommended change has not been made.

Definitions—This section of the proposed rulemaking was the focus of a large number of comments. Nearly every term in the section was discussed in one or more of the comments and a number of amendments have been made as a result of the comments. The comments made the point that the term "reclamation" was defined in three different places in the definition section. In recognition of this obviously poor arrangement of the section, the interim final rulemaking consolidates all of the information concerning the term "reclamation" in one paragraph, paragraph (a). The new definition is shorter and clearer and meets most of the points raised in the comments about that term.

The comments on the term "environment" requested two changes. The first change recommended was the addition of another sentence to the term as it appeared in the proposed rulemaking. The suggested sentence was further elaboration on what the environment includes and was not needed because the existing definition is clear. The second change requested was the insertion of the word "mineral" in the listing of elements making up the environment. This change has been adopted because minerals are an important element of the environment.

The term "identified wilderness study area" received only one comment other than general comments that referred to the term. All of the comments wanted the term to be limited to roadless areas of 5,000 acres or more. The 5,000 acre and roadless island limitation has been made part of the interim final rulemaking and the suggested change is included in this section. As a result of suggestions adopted, this rulemaking now uses the phrase "lands under wilderness review" in describing lands covered by this rulemaking, instead of the term "potential wilderness study areas". The word "identified" has been deleted because it is no longer needed.

A large number of comments were directed at the term "impairment of suitability for inclusion in the wilderness system." Several of the comments challenged the concept of allowing any impairment in areas under wilderness consideration while several others expressed the view that limitations on impairment should be imposed sparingly and that the five year reclamation period was too short. The wilderness provisions of the Federal Land Policy and Management Act contemplated temporary impacts in areas under wilderness consideration as does this rulemaking. The rulemaking continues to allow temporary impacts if reclamation can be accomplished to restore the area to its condition prior to the disturbance so the area can be included in the wilderness system. As discussed earlier, the question of when reclamation should be required was

carefully studied and it was determined that all reclamation must be accomplished by the date the Secretary of the Interior is scheduled to make his recommendations to the President on each of the wilderness areas. If the areas are to meet the requirements of the Wilderness Act at the time they might be considered by Congress, it is necessary for reclamation to have been accomplished at the time of Secretarial recommendation. Therefore, the language of this term has been amended to reflect this decision.

The definition of "reclamation" has been amended to make it clear that the reclamation standard is to apply to the area as a whole in the determination of whether reclamation has been appropriately accomplished. These additional words clarify the intent of the paragraph.

A comment on the term "mining operations" questioned the use of the word "exploration". In response to this comment, the word "exploration" has been deleted and the more definitive word "prospecting" inserted.

This clarifies exactly the type of operation that is included within the definition of the term. Another change that has been made for clarification was the addition of words making it clear that mining operations cover activities on or off the mining claim, if those activities are on public lands.

No comments were received on the term "operator". The definition of the term has been changed slightly to delete words that are included in the definition of "mining operations" elsewhere in the section.

In response to the many comments that requested the inclusion of the term "authorized officer" in the definition section, that term has been added to this section so that the officer can be identified.

As a result of the many general and specific comments objecting to the use of the term "potential wilderness study area", the term has been deleted from the definition section and from other sections of the interim final rulemaking. The phrase "lands under wilderness review", which is a more accurate description of lands being reviewed for wilderness characteristics, at all stages of this review, has been substituted in other sections of the rulemaking.

The term "manner and degree" drew more comments than any other term in the definition section. Most of the comments expressed the view that any existing activity that caused impacts of an impairing nature in a wilderness area should be stopped. Other comments felt that the definition was too narrow and would halt all existing mining operations in wilderness areas. The term as it is used in the interim final rulemaking permits continuation of existing operations even if they cause permanent impairment of the area as long as there is no change in the "manner and degree" of the operation. The language of the paragraph has been amended to make it clear that there can be a change in activity if the impact caused by the change is not significantly different from that of existing impacts. This amendment will allow changes in mining operations so that mining operations can go forward but only if those operations do not cause different impacts. This provision is consistent with the provisions of the Federal Land Policy and Management Act that authorizes the continuation of activities on existing operations if they are in the same manner and degree as was being conducted on the effective date of the Act.

Three new terms have been added to the interim final rulemaking section on definitions. One of the terms, "undue and unnecessary degradation" was suggested in a number of the comments. The term is used in the interim final rulemaking and the definition is included so that its meaning is clearly understood. The second and third terms are "valid existing right" and "substantially unnoticeable". These terms have been added to clarify their meaning as they are used in the rulemaking.

Policy—For reasons discussed earlier in this preamble, the reference to potential wilderness study areas has been deleted from the policy section. Another change made in the policy section and other sections of the rulemaking as a result of comments is the substitution of the word "operations" for the word "activity" when used in the phrase "mining operations". This change was made to clarify the rulemaking by using a term, "mining operations", that is defined in the rulemaking and its use is clear. Several comments wanted the policy section and other sections of the proposed rulemaking amended to include the words "on or before October 21, 1976", for the words "on October 21, 1976". This change has not been adopted but the interim management policy clearly interprets "on October 21, 1976", to include those operations that might have been temporarily inactive on that specific date if the period of inactivity did not exceed twelve months. This rulemaking will be interpreted in the same way as the guidance set out in the interim management policy and will include those operations that might have been temporarily inactive on October 21, 1976.

In general, the comments on the section indicated that the section overstated the authority of the Secretary of the Interior with reference to controlling mining operations in wilderness areas. The policy section is a clear statement of the Departmental policy on management of mining operations in wilderness areas and the authority for that policy as expressed in the various laws granting authority to protect lands under wilderness review until such time as the Congress determines whether they should or should not be included in the National Wilderness Preservation System. Therefore, the policy section has not been amended except for the changes discussed earlier.

Scope—The scope section of the interim final rulemaking contains two changes. The first change is the elimination of the reference to potential wilderness study areas and is in keeping with that change made in other sections of the rulemaking. The second change is the deletion of the reference to "road" and limits the section's application to "means of access". As several of the comments pointed out, the existence of roads is incompatible with wilderness characteristics and the reference is inappropriate. This change is also made in other sections of the rulemaking.

Plans of operations—This section drew several comments requesting language be added to the section to make it clear that the approval of a plan of operations will be arrived at through consultation between the authorized officer and the operator and not just handed down by the authorized officer. A complete reading of the rulemaking makes it clear that a consultation process will be used in arriving at an approved plan of operations. The finalization of any plan will be arrived at after discussion between the parties, with the authorized officer having the final responsibility as to the contents of any plan.

A second set of comments on this section wanted it amended to require that the operator submit a plan of reclamation with a plan of operations. This change was not made because small operators do not have the capability of developing a reclamation plan and to require one would place an unreasonable burden on them. The section does allow the submission of a plan of reclamation with a plan of operations if the operator wishes to submit one. Other sections of the rulemaking require that a plan of reclamation be a part of any approved plan of operations and in those

instances where the operator does not submit a plan of reclamation, the authorized officer will develop one in cooperation with the operator. In most instances, especially at the beginning of the program initiated by this rulemaking, plans of reclamation will not be submitted, but will be developed by the authorized officer.

When required—The opening paragraph of this section has been amended to delete the phrase "potential or identified wilderness study areas" and replaced with the phrase "lands under wilderness study". This change is consistent with the same change made and discussed in earlier sections. In addition to the comments requesting the deletion of the potential wilderness areas, other comments discussed the threshold concept used in the rulemaking to determine when a plan of operations is required. Some comments suggested that the threshold should be set at a numerically identifiable figure, such as 5,000 tons of ore per year. Others suggested that the threshold concept was inappropriate because no mining operations should be permitted in an area under wilderness review that caused any impairment. In this same vein, one comment felt it inappropriate to have a section in the rulemaking for allowance of plans of operations on the basis that they could not be approved because any activity that caused impairment could not be approved. The threshold concept has been retained because those activities permitted by the threshold should not impair those plans of operations that are consistent with the provisions of this rulemaking will be approved.

Several minor changes in this section of the rulemaking were suggested by the comments. The reference to "roads" has been deleted and replaced with "means of access" as requested by comments. Another change made in response to comments was a further definition of what is meant by cutting of trees. To clarify what is meant, words have been added to indicate that the trees must be 2 or more inches in diameter at their base in order to require a plan of operations. There were some comments desiring clarification of the paragraph dealing with tracked or mechanized vehicles. No change was made in this paragraph because it covers the circumstances adequately.

Another concern raised in the comments was that the period for placing of a structure on a mining claim without a plan should be extended to 60 or more days. The figure was left at 30 days because the placing of a structure on a mining claim is an impact that affects the wilderness characteristics of an area and tight control should be kept on that activity. A few comments felt that the use of explosives was a natural part of mining and should not be covered by a plan of operations. This provision has been kept because the use of explosives can have serious impacts on an area and its use must be in accordance with appropriate safeguards. Finally, language has been added to the section requiring a plan of operations when an operation causes a change in a water course. This amendment was adopted as a result of several comments on this subject.

When not required—This section of the proposed rulemaking drew only a few comments. Generally, the comments were divided into two groups. The first group felt that no activity should be allowed in an area under wilderness review if it could cause adverse impacts and some, if not all of the things allowed by this section could cause impacts and should be covered by a plan of operations if allowed at all. The second group felt that the items covered by the section should be permitted but that the activities that would be allowed without a plan of operations should be enlarged. Some specific comments raised were: (1) The section appears to allow airborne drilling operations without the filing of a plan of operations. This section of the interim final rulemaking would permit airborne drilling operations. (2) There is no limit on the amount of samples that can be taken and some limit should be included in the rulemaking. No limit has been imposed but the use of tracked or mechanized equipment does require the filing of a plan. The amount of samples or specimens that can be removed under the conditions imposed by the rulemaking is very limited and should not cause impacts that impair the areas wilderness characteristics. Controlling such activity would be nearly impossible. (3) Another comment suggested that open areas should be defined. Open areas or open trails are defined in 43 CFR Part 8364 and those definitions apply to this rulemaking. No changes were made in this section of the interim final rulemaking.

Operations existing on October 21, 1976—This section was not amended to insert the words "or before" to clarify that "on October 21, 1976," means "on or before" that date as was suggested in several comments. The basis for not adopting the change has been explained earlier in the preamble. The section received several comments in addition to the ones discussed above. Some of the comments felt that the interpretation of what constituted operations "in the same manner and degree" could be so rigorous as to effectively destroy any ongoing mining operation. This interpretation is not what is intended. If the rulemaking is read in its entirety, and in combination with the Solicitor's Opinion on Wilderness (86 I.D. 89 (1979)), it is clear the rulemaking will not terminate mining operations that continue in the same manner and degree and do not cause undue and unnecessary degradation of the lands. On the other hand, other comments felt that this provision should not be made a part of the interim final rulemaking. These comments felt that any operation in a wilderness area should be required to file a plan of operations. While it is true that the rulemaking does not require the filing of a plan of operations for operations existing on October 21, 1976, close observation will be maintained on those operations to be sure that they do not exceed manner and degree and do not cause undue or unnecessary degradation. If, in the judgment of the authorized officer, any operation covered by this section exceeds manner and degree or causes undue and unnecessary degradation, that operation will be required to file a plan of operations. At the same time, the public can keep the authorized officer informed of any changes in the operation it observes that exceed the limits of this section. This close observation should keep any existing operation within the limits imposed by this section. This provision is under continuing study and will be changed if it is determined necessary.

Contents of plan of operations—The principal issue raised in the few comments received on this section was the lack of detail as to what should be contained in a plan of operations, with special emphasis on the lack of requirement for a plan of reclamation. As pointed out earlier in this preamble, the decision has been made to not require an operator to file a plan of reclamation as part of a plan of operations. However, mitigating measures for reclamation are required before a plan of operations can be approved. One comment did raise the point that there was no place of filing for a plan of operations set out in the proposed rulemaking. A review of the proposed rulemaking confirmed this comment and this section has been amended by the insertion of a new paragraph (a) setting out the place where a plan of operations is to be filed.

Plan approval—These sections of the proposed rulemaking received a large number of comments, with the principal concern being the provision that

allowed an operator to proceed with a mining operation if the operator had not been notified of the need for an extension of time to review the plan, as provided in the rulemaking. This concern was raised because some comments felt that this provision would allow impairing activities to begin and continue until discovered and stopped by the authorized officer. On the other side of the question, some comments argue that the failure to act within a timely manner should give the operator more assurance than that he could proceed at his own risk. The only change made in the section allowing an operator to proceed if he has not been notified of the need for additional time for review of the plan of operations is the insertion of language that removes any doubt that the option to proceed on the part of the operator cannot be construed as an approval of the plan of operations and those operations can be stopped if they are causing impairment or unnecessary damage.

Some of the comments pointed out that the proposed rulemaking did not make any special provision for those mining claims with valid existing rights on or before October 21, 1976. In recognition of the issue raised in the comments, the interim final rulemaking has been amended to include language that specifically covers approval action on mining claims with valid existing rights. Comments also raised questions about the fact that a delay in the approval of a plan of operations could delay required assessment work. The interim final rulemaking allows the authorized officer to approve activities consistent with existing State law if such activity does not impair the wilderness suitability of the area. This section will be interpreted in a manner consistent with like provisions of the interim management policy.

A couple of comments raised the question of whether a plan of operation should be subject to the provisions of the Endangered Species Act, as it is to the provisions of the National Environmental Policy Act and the National Historic Preservation Act. The interim final rulemaking has been changed to make this section subject to the provisions of the Endangered Species Act and compliance with the requirements of section 7 of that Act before a plan of operations is approved.

Among other changes in this section, a provision has been included that will allow the authorized officer to notify the operator that his operations are not covered by the requirement for a plan of operations and that the operation can proceed.

Finally, several of the comments suggested that the time frames for approval of a plan of operations were too short. We have again examined the time frames and the anticipated work load that will result from the issuance of this interim final rulemaking and have decided that the time frames can be met. It would be unfair to the mining industry to place interminable delays on them while other management work is being accomplished. The time frames will assure the mining industry of speedy action while also setting a time for review that is reasonable and can be met. Those operators who have submitted a plan and after 30 days has elapsed, wish to take the risk and begin operations without an approved plan of operations can proceed with the real possibility that their operations will be terminated if they are found to be impairing wilderness characteristics of the area.

Modification of plan—The major complaint raised by the comments on this section deals with the steps that must be followed if an operator refuses to accept a modification of a plan of operations that has been approved by the authorized officer and the time required to go through the modification process. The provisions set forth in this section are based on determinations that an approved plan of operations should give the operator assurance that he can proceed with his mining operation. Once a plan is approved, the operator should be able to go forward with his operation, making necessary investment of time and money, without having that operation stopped without a complete examination of the process followed in approving the plan. The section does give the State Director needed authority to stop operations that might be causing impairment or undue or unnecessary degradation of the land under wilderness review. The section represents a fair and equitable handling of a very difficult problem and has not been changed in the interim final rulemaking.

Another change in this section was inclusion of language consistent with the Federal Land Policy and Management Act that authorizes the continuance of regulation of mining claims patented in the California Desert Conservation area.

Existing operations—Nearly all of the comments received on this section felt that those mining operations that were commenced after October 21, 1976, and continued in operation on the effective date of this interim final rulemaking should be given a period in which to file a plan of operations and have their operations meet the requirements of this rulemaking. There was some difference as to the length of time for that period of grace, with some wanting the initial 60 day period lengthened and others wanting the extension either eliminated or shortened to a period of from 30 to 60 days. Some of the comments wanted express language in the rulemaking that would require the authorized officer to stop a mining operation if it was found to be causing impairment or undue or unnecessary degradation of lands under wilderness review. The language of the section allows the operation to continue according to the submitted plan of operations unless the operator is notified otherwise. The operator would be notified of changes that must be made if the authorized officer finds the operation to be causing undue or unnecessary degradation of the lands under wilderness review, or to make changes to end the offending actions. No substantive changes have been made in this section of the interim final rulemaking.

Bond requirements—The issue raised by many of the comments on this section was the fact that the bonding requirement was discretionary with the authorized officer. The comments expressed the view that bonding should be mandatory for mining operations located on lands under wilderness review. The interim final rulemaking continues the policy of discretionary bonding for mining operations located on lands under wilderness review. However, the authorized officer will be directed by policy guidance to carefully exercise his discretion on operations located on lands under wilderness review and to require bonding in those instances where the operator has not exercised good reclamation standards in the past. To require mandatory bonding could put most small miners out of business because they cannot obtain bonds.

Another area of concern was the setting of the bond amount. Many comments wanted language in the rulemaking requiring the authorized officer to set the amount of the bond at the full cost of reclamation of the area covered by the mining operation. This change has not been made because it would place an impossible burden on the small miner. The requiring of a bond and the attendant risk that the authorized officer may require forfeiture of the bond because the operator has not performed in accordance with the provisions of the plan of operations is sufficient deterrent. Requiring the forfeiture of a bond by the authorized officer would make it virtually impossible for the operator, to whom

that bond was issued, to ever obtain another bond and, without such a bond, he could not operate under this interim final rulemaking. Further, if a bonding requirement is included in any future rulemaking on surface management of mining claims on public lands, the forfeiture would have the effect of making it impossible for him to operate under that rulemaking if he were required to furnish a bond.

There was a difference between the comments as to the period a bond may be continued after replanting to assure revegetation. Some comments wanted the period extended while others wanted it shortened. After careful consideration, this section has been deleted because it is no longer relevant in that the rulemaking has new time frames for reclamation completion.

Environmental assessment—While most of the comments supported the need for environmental protection and attendant environmental assessment, some raised questions about the Bureau of Land Management's ability to meet the workload created by such assessments and the delay that would result from having to do the assessments. The time frames set in the interim final rulemaking have been discussed and can be met by the Bureau of Land Management. The delay imposed by the rulemaking will not be excessive and will not unduly interfere with the plans of operations. Every effort will be made to work with the mining community and the public to protect wilderness suitability with the least possible impact on the mining industry. Only minor editorial changes have been made in this section of the interim final rulemaking.

Requirements for environmental protection—Only a few comments were received on this section of the proposed rulemaking. Some of the comments made the point that all of the requirements set forth in this section were required by other laws and regulations and repeating them in this rulemaking was not necessary. The provisions are kept in the interim final rulemaking to make it clear to operators that they come under these provisions and that they are required to meet the listed standards. As some of the comments pointed out, there is an additional cost imposed upon the operator to comply with the environmental protection provisions, but those costs are offset by the benefits afforded the public from an enhanced environment.

Noncompliance—The comments on this section of the proposed rulemaking suggested stronger action be provided against an operator that is not in compliance with a plan of operations than the stopping of operations by court action. The first option available to the authorized officer if he finds an operator in noncompliance is to point out the noncompliance and attempt to get the operator to come into compliance. In most instances, the operator will cooperate. If the operator refuses to cooperate, the authorized officer can proceed with the steps provided for in the rulemaking with a final step being court action to stop the operations. The authorized officer can also check to see if the operator is in violation of other parts of the Bureau of Land Management regulations that provide criminal sanctions and enforce those against the operator. Further, if the conditions of the bond are being violated, the authorized officer can require forfeiture of the bond.

The Department of the Interior believes that mining operators are law abiding members of the public and will cooperate with the authorized officer in protecting the public lands and the wilderness values of those lands. If it is found that the mining community is not cooperative in this matter, then the question of imposition of criminal sanctions will be re-examined.

Access—Several of the comments on this section objected to the requirement that the access granted under the interim final rulemaking be non-exclusive access. The access that will be granted to a mining claim across public lands will allow public use unless there are circumstances present that would make it hazardous to the public to have joint use. In any case, the access route will be open to the use of other miners and any other users with a need for access to the area. Some comments expressed the view that the rulemaking could deny access to a valid mining claim located under the Mining Law of 1872. The rulemaking does not deny access nor is it intended to deny access, but it does recognize the authority of the Secretary of the Interior to impose conditions on that access. Those considerations will provide the greatest possible protection to the public lands and their resources, particularly the wilderness values, consistent with the right of access granted the mining claim locator by the Mining Law of 1872.

In response to the concern of some of the comments about roads being the only means of access contemplated by the rulemaking, the references to roads have been removed from the rulemaking and replaced with the words "means of access". It is clear that access can be granted by means other than roads and the rulemaking covers that possibility.

Finally, a few of the comments were concerned that the route of access to a mining claim would be established by the authorized officer without any reference to the operator and the impact the selected access route might have on the operations. The authorized officer will select the access route in consultation with the operator, after discussion of the operator's needs and his ability to meet the requirements imposed by the authorized officer. There is no intention to place conditions on a route of access that make it impossible for the operator to carry out operations that are approved under a plan of operations.

However, the final decision as to the means of access will be with the authorized officer who has the responsibility of protecting the public lands and their resources.

Multiple-use conflicts—The few comments on this section expressed the view that use by the mining operator should be given more weight in resolving conflicts than other uses of the public lands in the area of the mining claim. The comments wanted this to be a requirement of the rulemaking. This change was not adopted. The authorized officer can balance the conflicts, giving appropriate weight to each one, including the valid existing rights that might exist with a mining claim, and attempt to work out any differences between users. It is recognized that this will not be possible in every instance, but the authorized officer needs the authority given him by the rulemaking to try to resolve any differences.

Inspection—This section drew a few comments that wanted to be certain that the inspection would be conducted at reasonable times, during business hours, and in accordance with acceptable regulatory practice. Generally, inspections will be conducted during business hours, but where there are reports of conditions that need immediate inspection, the inspection might occur at a time other than regular business hours. There is no intention to sneak up on the mining operator, but to have Departmental personnel carry out inspections of the operations whenever they are in the area. If, however, there are reports of activity that is causing damage, the report will be checked out and an inspection may occur.

Notice of suspensions of operations—One comment pointed out that an operator might not know exactly when his operations have been suspended because of any number of circumstances. The comment pointed out that an operator might close for a day or two to get supplies and find that the lack of finances or other reasons, including sickness, might delay his returning to work for 30 days or more

without any intention on the part of the operator to suspend his operations. The situation discussed in the comment is recognized, but if an operator has been away from his operation for 30 days or more, he should know what the likelihood of his being able to resume operations is and act accordingly. The provision allows enough latitude and has not been changed. Other comments on this section questioned the need to post the claimant's name and address on the operation. Posting will allow members of the public to notify the operator if they see something amiss and want to report it. It will also allow quicker notice to the operator by Department personnel because it will eliminate the necessity to check with their office before being able to notify the operator of any problems on the claim.

Cessation of operations—The comments on this section criticized the word "clean-up" as it is used in the section. The main thrust of the comments was that the word was not definitive enough and should be changed. The word has been deleted and the more precise word "reclaim" substituted for it. The requirement to reclaim is consistent with the provisions of the interim final rulemaking and is more easily understood since reclamation is defined in the rulemaking.

The other area of concern expressed in the comments was a question of whether the Secretary of the Interior had the authority to require the reclamation of an abandoned site. The authority given the Secretary of the Interior to protect the wilderness characteristics of lands under wilderness review extends to reclamation of those lands if operations are permitted on them. It is true that the reclamation of a mining claim may obscure evidence of mineralization, but this loss is off-set by the return of the lands to their original wilderness status.

Appeals—The comments on this section wanted the rulemaking to allow any person affected rather than only an affected operator to have the right to appeal a decision. The interim final rulemaking has been amended to authorize an appeal by an affected party. Any individual that is adversely affected by action on a mining plan can appeal that decision. This change is in keeping with the requirements for public participation and right to appeal provided in the Federal Land Policy and Management Act.

A few comments questioned the expertise of the Interior Board of Land Appeals to handle the appeals created by this rulemaking. The Board of Land Appeals is the board created by the Department of the Interior to handle appeals of this type and it has shown its ability to resolve the many appeals that come before it. Some concern was expressed in the comments about the fact that lands under the jurisdiction of an agency other than the Department of the Interior were discussed in a rulemaking that is applicable to the Bureau of Land Management, an agency of the Department of the Interior. This provision has been deleted because the Bureau of Land Management is involved only in the study of lands under its jurisdiction and the provision is not applicable.

Public Availability of Information—The comments on this section wanted the rulemaking to provide greater confidentiality for information that an operator declares to be confidential. The provisions of this section follow the requirements of the Freedom of Information Act and no changes have been made in the section.

Editorial changes and corrections have been made as necessary.

The principal author of this interim final rulemaking is Robert C. Bruce of the Office of Legislation and Regulatory Management, Bureau of Land Management, assisted by the Branch of Mineral Resources, Bureau of Land Management, and Mr. Kenneth Lee of the Office of the Solicitor, Department of the Interior.

This interim final rulemaking is being considered as part of the Environmental Impact Statement and the regulatory analysis that is being prepared in connection with the rulemaking on surface management of hard rock mining on the public lands (43 CFR 3809).

Under the authority of section 603 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1782), Part 3800, Group 3800, Subchapter C, Chapter II, Title 43 of the Code of Federal Regualtions is amended by adding subpart 3802 as follows.

James W. Curlin,
Acting Assistant Secretary of the Interior.
February 27, 1980.

PART 3800—MINING CLAIMS UNDER THE GENERAL MINING LAWS

Subpart 3802—Exploration and Mining—Wilderness Review Program

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Authority: 43 U.S.C. 1782.

Subpart 3802—Exploration and Mining, Wilderness Review Program

§ 3802.0-1 Purpose.

The purpose of this subpart is to establish procedures to prevent impairment of the suitability of lands under wilderness review for inclusion in the wilderness system and to prevent unnecessary or undue degradation by activities authorized by the United States Mining Laws and provide for environmental protection of the public lands and resources.

§ 3802.0-2 Objectives.

The objectives of this subpart are to:

(a) allow mining claim location, prospecting, and mining operations in lands under wilderness review pursuant to the United States Mining Laws, but only in a manner that will not impair the suitability of an area for inclusion in the wilderness system unless otherwise permitted by law; and

(b) assure management programs that reflect consistency between the United States Mining Laws, and other appropriate statutes.

§ 3802.0-3 Authority.

These regulations are issued under the authority of sections 302 and 603 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1732, 1733, and 1782).

§ 3802.0-5 Definitions.

As used in this subpart, the term:

(a) "Reclamation", which shall be commenced, conducted and completed as soon after disturbance as feasible without undue physical interference with mining operations, means:

(1) Reshaping of the lands disturbed and affected by mining operations to the approximate original contour or to an

appropriate contour considering the surrounding topography as determined by the authorized officer;

(2) Restoring such reshaped lands by replacement of topsoil; and

(3) Revegetating the lands by using species previously occurring in the area to provide a vegetative cover at least to the point where natural succession is occuring.

(b) "Environment" means surface and subsurface resources both tangible and intangible, including air, water, mineral, scenic, cultural, paleontological, vegetative, soil, wildlife, fish and wilderness values.

(c) "Wilderness Study Area" means a roadless area of 5,000 acres or more or roadless islands which have been found through the Bureau of Land Management wilderness inventory process to have wilderness characteristics (thus having the potential of being included in the National Wilderness Preservation System), and which will be subjected to intensive analysis through the Bureau's planning system, and through public review to determine wilderness suitability, and is not yet the subject of a Congressional decision regarding its designation as wilderness.

(d) "Impairment of suitability for inclusion in the Wilderness System" means taking actions that cause impacts, that cannot be reclaimed to the point of being substantially unnoticeable in the area as a whole by the time the Secretary is scheduled to make a recommendation to the President on the suitability of a wilderness study area for inclusion in the National Wilderness Preservation System or have degraded wilderness values so far, compared with the area's values for other purposes, as to significantly constrain the Secretary's recommendation with respect to the area's suitability for preservation as wilderness.

(e) "Mining claim" means any unpatented mining claim, millsite, or tunnel site authorized by the United States mining laws.

(f) "Mining operations" means all functions, work, facilities, and activities in connection with the prospecting, development, extraction, and processing of mineral deposits and all uses reasonably incident thereto including the construction and maintenance of means of access to and across lands subject to these regulations, whether the operations take place on or off the claim.

(g) "Operator" means a person conducting or proposing to conduct mining operations.

(h) "Authorized officer" means any employee of the Bureau of Land Management to whom has been delegated the authority to perform the duties described in this subpart.

(i) "Wilderness inventory" means an evaluation conducted under BLM wilderness inventory procedures which results in a written description and map showing those lands that meet the wilderness criteria established under section 603(a) of the Federal Land Policy and Management Act.

(j) "Manner and degree" means that existing operations will be defined geographically by the area of active development and the logical adjacent (not necessarily contiguous) continuation of the existing activity, and not necessarily by the boundary of a particular, claim or lease, and in some cases a change in the kind of activity if the impacts from the continuation and change of activity are not of a significantly different kind than the existing impacts. However, the significant measure for these activities is still the impact they are having on the wilderness potential of an area. It is the actual use of the area, and not the existence of an entitlement for use, which is the controlling factor. In other words, an existing activity, even if impairing, may continue to be expanded in an area or progress to the next stage of development so long as the additional impacts are not significantly different from those caused by the existing activity. In determining the manner and degree of existing operations, a rule of reason will be employed.

(k) "Valid existing right" means a valid discovery had been made on a mining claim on October 21, 1976, and continues to be valid at the time of exercise.

(l) "Undue and unnecessary degradation" means impacts greater than those that would normally be expected from an activity being accomplished in compliance with current standards and regulations and based on sound practices, including use of the best reasonably available technology.

(m) "Substantially unnoticeable" means something that either is so insignificant as to be only a very minor feature of the overall area or is not distinctly recognizable by the average visitor as being manmade or man-caused because of age, weathering or biological change.

§ 3802.0-6 Policy.

Under the 1872 Mining Law (30 U.S.C. 22 *et seq.*), a person has a statutory right consistent with other laws and Departmental regulations, to go upon the open (unappropriated and unreserved) public lands for the purpose of mineral prospecting, exploration, development, and extraction. The Federal Land Policy and management Act requires the Secretary to regulate mining operations in lands under wilderness review to prevent impairment of the suitability of these areas for inclusion in the wilderness system. However, mining operations occurring in the same manner and degree that were being conducted on October 21, 1976, may continue, even if they are determined to be impairing. Mining activities not exceeding manner and degree shall be regulated only to prevent undue and unnecessary degradation of public lands.

§ 3802.0-7 Scope.

(a) These regulations apply to mining operations conducted under the United States mining laws, as they affect the resources and environment or wilderness suitability of lands under wilderness review.

(b) These regulations apply to means of access across public land for the purpose of conducting operations under the United States mining laws.

§ 3802.1 Plan of operations.

An approved plan shall include appropriate environmental protection and reclamation measures selected by the authorized officer that shall be carried out by the operator. An operator may prepare and submit with a plan measures for the reclamation of the affected area.

§ 3802.1-1 When required.

An approved plan of operations is required for operations within lands under wilderness review prior to commencing:

(a) Any mining operations which involve construction of means of access, including bridges, landing areas for aircraft, or improving or maintaining such access facilities in a way that alters the alignment, width, gradient size, or character of such facilities;

(b) Any mining operations which destroy trees 2 or more inches in diameter at the base;

(c) Mining operations using tracked vehicles or mechanized earth moving equipment, such as bulldozers or backhoes;

(d) Any operations using motorized vehicles over other than "open use areas and trails" as defined in Subpart 6292 of this title, *off-road vehicles*, unless the use of a motorized vehicle can be covered by a temporory use permit issued under Subpart 8372 of this title;

(e) The construction or placing of any mobile, portable or fixed structure on public land for more than 30 days;

(f) On mining operations requiring the use of explosives; or

(g) Any operation which may cause changes in a water course.

§ 3802.1-2 When not required.

A plan of operations under this subpart is not required for—

(a) Searching for and occasionally removing mineral samples or specimens;

(b) Operating motorized vehicles over "open use areas and trails" as defined in 43 CFR Part 8340 so long as the vehicles conform to the operating regulations and vehicle standards contained in that subpart;

(c) Maintaining or making minor improvements of existing access routes, bridges, landing areas for aircraft, or other facilities for access where such improvements or maintenance shall not alter the alignment, width, gradient, size or character of such facilities; or

(d) Making geological, radiometric, geochemical, geophysical or other tests and measurements using instruments, devices, or drilling equipment which are transported without using mechanized earth moving equipment or tracked vehicles.

§ 3802.1-3 Operations existing on October 21, 1976.

A plan of operations shall not be required for operations that were being conducted on October 21, 1976, unless the operation is undergoing changes that exceed the manner and degree of operations on October 21, 1976. However, if the authorized officer determines that operations in the same manner and degree are causing undue or unnecessary degradation of lands and resources or adverse environmental effects, an approved plan containing protective measures may be required. Any changes planned in an existing operation that would result in operations exceeding the present manner and degree shall be delayed until the plan is processed under provisions of § 3802.1-5 of this title.

§ 3802.1-4 Contents of plan of operations.

(a) A plan of operations shall be filed in the District Office of the Bureau of Land Management in which the claim is located.

(b) No special form is required to file a plan of operations.

(c) The plan of operations shall include—

(1) The name and mailing address of both the person for whom the operation will be conducted, and the person who will be in charge of the operation and should be contacted concerning the reclamation or other aspects of the operation (any change in the mailing address shall be reported promptly to the authorized officer);

(2) A map, preferably a topographic map, or sketch showing present road, bridge or aircraft landing area locations, proposed road, bridge or aircraft landing area locations, and size of areas where surface resources will be disturbed;

(3) Information sufficient to describe either the entire operation proposed or reasonably foreseeable operations and how they would be conducted, including the nature and location of proposed structures and facilities;

(4) The type and condition of existing and proposed means of access or aircraft landing areas, the means of transportation used or to be used, and the estimated period during which the proposed activity will take place;

(5) If and when applicable, the serial number assigned to the mining claim, mill or tunnel site filed pursuant to Subpart 3833 of this title

§ 3802.1-5 Plan approval.

(a) The authorized officer shall promptly aknowledge the receipt of a plan of operations and within 30 days of receipt of the plan act on the plan of operations to determine its acceptability.

(b) The authorized officer shall review the plan of operations to determine if the operations are impairing the suitability of the area for preservation as wilderness. Pending approval of the plan of operations, mining operations may continue in a manner that minimizes environmental impacts as prescribed in § 3802.3 of this title. After completing the review of the plan of operations, the authorized officer shall give the operator written notice that: (1) The plan is approved subject to measures that will prevent the impairment of the suitability of the area for preservation as wilderness as determined by the authorized officer; (2) Plans covering operations on a claim with a valid existing right are approved subject to measures that will prevent undue and unnecessary degradation of the area; or (3) the anticipated impacts of the mining operations are such that all or part of further operations will impair the suitability of the area for preservation as wilderness, the plan is disapproved and continuance of such operations is not allowed.

(c) Upon receipt of a plan of operations for mining activities commencing after the effective date of these regulations, the authorized officer may notify the operator, in writing, that:

(1) In an area of lands under wilderness review where an inventory has not been completed, an operator may agree to operate under a plan of operations that includes terms and conditions that would be applicable in a wilderness study area. Without an agreement to this effect, no action may be taken on the plan until a wilderness inventory is completed; or

(2) The area has been inventoried and a final decision has been issued and become effective that the area does not contain wilderness characteristics, and that the mining operations are no longer subject to these regulations; or

(3) The anticipated impacts are such that all or part of the proposed mining operations will impair the suitability of the area for preservation as wilderness, and therefore, the proposed mining operation cannot be allowed.

(d) In addition to paragraphs (a) through (c) of this section, the following general plan approval procedures may also apply. The authorized officer may notify the operator, in writing, that:

(1) The plan of operations is unacceptable and the reasons therefore; or

(2) Modification of the plan of operations is necessary to meet the requirements of these regulations;

(3) The plan of operations is being reviewed, but that more time, not to exceed an additional 60 days, is necessary to complete such review, setting forth the reasons why additional time is needed except in those instances where it is determined that an Environmental Impact Statement, compliance with section 106 of the National Historic Preservation Act (NHPA) or section 7 of the Endangered Species Act is needed. Periods during which the area of operations is inaccessible for inspection due to climatic conditions, fire hazards or other physical conditions or legal impediments, shall not be included when counting the 60 calendar day period; or

(4) The proposed operations do not require a plan of operations.

(e) If the authorized officer does not notify the operator of any action on the plan of operations within the 30-day period, or the 60-day extension, or notify the operator of the need for an Environmental Impact Statement or compliance with section 106 of NHPA or section 7 of the Endangered Species Act, operations under the plan may begin. The option to begin operations under this section does not constitute approval of a plan of operations. However, if the authorized officer at a later date finds that operations under the plan are impairing wilderness suitability, the authorized officer shall notify the operator that the operations are not in compliance with these regulations and what changes are needed, and shall

require the operator to submit a modified plan of operations, within a time specified in the notice. If the operator is notified of the need for an Environmental Impact Statement, the plan of operations shall not be approved before 30 days after a final statement is prepared and filed with the Environmental Protection Agency. If the is operator notified of the need for compliance with section 106 of the NHPA or section 7 of the Endangered Species Act, the plan of operations shall not be approved until the compliance responsibilities of the Bureau of Land Management are satisfied.

(f) If cultural resource properties listed on or eligible for listing on the National Register of Historic Places are within the area of operations, no operations which would affect those resources shall be approved until compliance with section 106 of the National Historic Preservation Act is accomplished. The operator is not required to do or to pay for an inventory. The responsibility and cost of the cultural resource mitigation, except as provided in § 3802.3–2(f) of this title, included in an approved plan of operation shall be the operator's.

(g) Pending final approval of the plan of operations, the authorized officer may approve any operations that may be necessary for timely compliance with requirements of Federal and State laws. Such operations shall be conducted so as to prevent impairment of wilderness suitability and to minimize environmental impacts as prescribed by the authorized officer in accordance with the standards contained in § 3802.3 of this title.

§ 3802.1–6 Modification of plan.

(a) If the development of a plan for an entire operation is not possible, the operator shall file an initial plan setting forth this proposed operation to the degree reasonably foreseeable at that time. Thereafter, the operator shall file a supplemental plan or plans prior to undertaking any operations not covered by the initial plan.

(b) At any time during operations under an approved plan of operations, the authorized officer or the operator may initiate a modification of the plan detailing any necessary changes that were unforeseen at the time of filing of the plan of operations. If the operator does not furnish a proposed modification within a time considered reasonable by the authorized officer, the authorized officer may recommend to the State Director that the operator be required to submit a proposed modification of the plan. The recommendation of the authorized officer shall be accompanied by a statement setting forth the supporting facts and reasons for his recommendations. In acting upon such recommendation, except in the case of a modification under § 3802.1–5(e) of this title, the State Director shall determine (1) whether all reasonable measures were taken by the authorized officer to predict the environmental impacts of the proposed operations; (2) whether the disturbance is or may become of such significance as to require modification of the plan of operations in order to meet the requirement for environmental protection specified in § 3802.3–2 of this title, and (3) whether the disturbance can be minimized using reasonable means. Lacking such a determination by the State Director, an operator is not required to submit a proposed modification of an approved plan of operations. Operations may continue in accordance with the approved plan of operations until a modified plan is approved, unless the State Director determines that the operations are causing impairment or unnecessary or undue degradation to surface resources. He shall advise the operator of those measures needed to avoid such damage and the operator shall immediately take all necessary steps to implement measures recommended by the State Director.

(c) A supplemental plan of operations or a modification of an approved plan of operations shall be approved by the authorized officer in the same manner as the initial plan of operations.

§ 3802.1–7 Existing operations.

(a) Persons conducting mining operations on the effective date of these regulations, who would be required to submit a plan of operations under § 3802.1–1 of this title, may continue operations but shall, within 60 days after the effective date of these regulations, submit a plan of operations. Upon a showing of good cause, the authorized officer shall grant an extension of time to submit a plan of operations not to exceed an additional 180 days.

(b) Operations may continue according to the submitted plan of operations during its review unless the operator is notified otherwise by the authorized officer.

(c) Upon approval of a plan of operations, mining operations shall be conducted in accordance with the approved plan.

§ 3802.2 Bond requirements.

(a) Any operator who conducts mining operations under an approved plan of operations shall, if required to do so by the authorized officer, furnish a bond in an amount determined by the authorized officer. The authorized officer may determine not to require a bond where mining operations would cause nominal environmental damage, or the operator has an excellent past record for reclamation. In determining the amount of the bond, the authorized officer shall consider the estimated cost of stabilizing and reclaiming all areas disturbed by the operations consistent with § 3802.3–2(h) of this title.

(b) In lieu of a bond, the operator may deposit and maintain in a Federal depository account of the United States Treasury, as directed by the authorized officer, cash in an amount equal to the required dollar amount of the bond or negotiable securities of the United States having a face and market value at the time of deposit of not less than the required dollar amount of the bond.

(c) In place of the individual bond on each separate operation, a blanket bond covering hardrock mining operations may be furnished, at the option of the operator, if the terms and conditions as determined by the authorized officer are sufficient to comply with these regulations.

(d) In the event that an approved plan of operations is modified in accordance with § 3802.1–5 of this title, the authorized officer shall review the initial bond for adequacy and, if necessary, shall require that the amount of bond be adjusted to conform to the plan of operations, as modified.

(e) When a mining claim is patented, except for the California Desert Conservation Area, the authorized officer shall release the operator from that portion of the performance bond and plan of operations which applies to operations within the boundaries of the patented land. The authorized officer shall release the operator from the remainder of the performance bond and plan of operations (covering approved means of access outside the boundaries of the mining claim) when the operator has either completed reclamation in accordance with paragraph (f) of this section or those requirements are waived by the authorized officer.

(f) When all or any portion of the reclamation has been completed in accordance with paragraph (h) of § 3802.3–2 of this title, the operator shall notify the authorized officer who shall promptly make a joint inspection with the operator. The authorized officer shall then notify the operator whether the performance under the plan of operations is accepted. When the authorized officer has accepted as completed any portion of the reclamation, he shall reduce

proportionally the amount of bond with respect to the remaining reclamation.

§ 3802.3 Environmental protection.

§ 3802.3-1 Environmental assessment.

(a) When a plan of operations or significant modification is filed, the authorized officer shall make an environmental assessment to identify the impacts of the proposed mining operations upon the environment and to determine whether the proposed activity will impair the suitability of the area for preservation as wilderness or cause unnecessary and undue degradation and whether an environmental impact statement is required.

(b) Following completion of the environmental assessment or the environmental impact statement, the authorized officer shall develop measures deemed necessary for inclusion in the plan of operations that will prevent impairment of wilderness suitability and undue or unnecessary degradation of land and resources.

(c) If as a result of the environment assessment, the authorized officer determines that there is substantial public interest in the proposed mining operations, the operator may be notified that an additional period of time is required to consider public comments. The period shall not exceed the additional 60 days provided for approval of a plan in § 3802.1-4 of this title except as provided for cases requiring an environmental impact statement, a cultural resource inventory or section 7 of the Endangered Species Act.

§ 3802.3-2 Requirements for environmental protection.

(a) *Air Quality.* The operator shall comply with applicable Federal and State air quality standards, including the requirements of the Clean Air Act (42 U.S.C. 1857 et seq.).

(b) *Water Quality.* The operator shall comply with applicable Federal and State water quality standards, including regulations issued pursuant to the Federal Water Pollution Control Act (33 U.S.C. 1151 et seq.).

(c) *Solid Wastes.* The operator shall comply with applicable Federal and State standards for the disposal and treatment of solid wastes. All garbage, refuse, or waste shall either be removed from the affected lands or disposed or treated to minimize, so far as is practicable, its impact on the environment and the surface resources. All tailings, waste rock, trash, deleterious materials of substances and other waste produced by operations shall be deployed, arranged, disposed or treated to minimize adverse impact upon the environment, surface and subsurface resources.

(d) *Visual Resources.* The operator shall, to the extent practicable, harmonize operations with the visual resources, identified by the authorized officer, through such measures as the design, location of operating facilities and improvements to blend with the landscape.

(e) *Fisheries, Wildlife and Plant Habitat.* The operator shall take such action as may be needed to minimize or prevent adverse impact upon plants, fish, and wildlife, including threatened or endangered species, and their habitat which may be affected by the operations.

(f) *Cultural and Paleontological Resources.* (1) The operator shall not knowingly disturb, alter, injure, destroy or take any scientifically important paleontological remains or any historical, archaeological, or cultural district, site, structure, building or object.

(2) The operator shall immediately bring to the attention of the authorized officer any such cultural and/or paleontological resources that might be altered or destroyed by his operation, and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his attention, and determine within 10 working days what action shall be taken with respect to such discoveries.

(3) The responsibility and the cost of investigations and salvage of such values discovered during approved operations shall be the Federal Goverment's.

(g) *Access Routes.* No new access routes that would cause more than temporary impact and therefore would impair wilderness suitability shall be constructed in a wilderness study area. Temporary access routes that are constructed by the operator shall be constructed and maintained to assure adequate drainage and to control or prevent damage to soil, water, and other resource values. Unless otherwise approved by the authorized officer, roads no longer needed for operations shall be closed to normal vehicular traffic; bridges and culverts shall be removed; cross drains, dips, or water bars shall be constructed, and the road surface shall be shaped to as near a natural contour as practicable, be stablized and revegetated as required in the plan of operations.

(h) *Reclamation.* (1) The operator shall perform reclamation of those lands disturbed or affected by the mining operation conducted by the operator under an approved plan of operations containing reclamation measures stipulated by the authorized officer as contemporaneously as feasible with operations. The disturbance or effect on mined land shall not include that caused by separate operations in areas abandoned before the effective date of these regulations.

(2) An operator may propose and submit with his plan of operations measures for reclamation of the affected area.

(i) *Protection of survey monuments.* The operator shall, to the extent practicable and consistent with the operation, protect all survey monuments, witness corners, reference monuments, bearing trees and line trees against destruction, obliteration, or damage from the approved operations. If, in the course of operations, any monuments, corners or accessories are destroyed, obliterated or damaged by such operations, the operator shall immediately report the matter to the authorized officer. The authorized officer shall prescribe in writing the requirement for the restoration or reestablishment of monuments, corners, bearing trees, and line trees.

§ 3802.4 General provisions.

§ 3802.4-1 Noncompliance.

(a) An operator who conducts mining operations undertaken either without an approved plan of operations or without taking actions specified in a notice of noncompliance within the time specified therein may be enjoined by an appropriate court order from continuing such operations and be liable for damages for such unlawful acts.

(b) Whenever the authorized officer determines that an operator is failing or has failed to comply with the requirements of an approved plan of operations, or with the provisions of these regulations and that noncompliance is causing impairment of wilderness suitability or unnecessary and undue degradation of the resources of the lands involved, the authorized officer shall serve a notice of noncompliance upon the operator by delivery in person to the operator or the operator's authorized agent, or by certified mail addressed to the operator's last known address.

(c) A notice of noncompliance shall specify in what respects the operator is failing or has failed to comply with the requirements of the plan of operations of the provisions of applicable regulations, and shall specify the actions which are in violation of the plan or regulations and the actions which shall be taken to correct the noncompliance and the time

limits, not to exceed 30 days, within which corrective action shall be taken.

§ 3802.4-2 Access.

(a) An operator is entitled to non-exclusive access to his mining operations consistent with provisions of the United States mining laws and Departmental regulations.

(b) In approving access as part of a plan of operations, the authorized officer shall specify the location of the access route, the design, construction, operation and maintenance standards, means of transportation, and other conditions necessary to prevent impairment of wilderness suitability, protect the environment, the public health or safety, Federal property and economic interests, and the interests of other lawful users of adjacent lands or lands traversed by the access route. The authorized officer may also require the operator to utilize existing access routes in order to minimize the number of separate rights-of-way, and, if practicable, to construct access routes within a designated transportation and utility corridor. When commercial hauling is involved and the use of an existing access route is required, the authorized officer may require the operator to make appropriate arrangements for use and maintenance.

§ 3802.4-3 Multiple-use conflicts.

In the event that uses under any lease, license, permit, or other authorization pursuant to the provisions of any other law, shall conflict, interfere with, or endanger operations in approved plans or otherwise authorized by these regulations, the conflicts shall be reconciled, as much as practicable, by the authorized officer.

§ 3802.4-4 Fire prevention and control.

The operator shall comply with all applicable Federal and State fire laws and regulations, and shall take all reasonable measures to prevent and suppress fires on the area of mining operations.

§ 3802.4-5 Maintenance and public safety.

During all operations, the operator shall maintain his structures, equipment, and other facilities in a safe and orderly manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to protect the public in accordance with applicable Federal and State laws and regulations.

§ 3802.4-6 Inspection.

The authorized officer shall periodically inspect operations to determine if the operator is complying with these regulations and the approved plan of operations, and the operator shall permit access to the authorized officer for this purpose.

§ 3802.4-7 Notice of suspension of operations.

(a) Except for seasonal suspension, the operator shall notify the authorized officer of any suspension of operations within 30 days after such suspension. This notice shall include:

(1) Verification of intent to maintain structures, equipment, and other facilities, and

(2) The expected reopening date.

(b) The operator shall maintain the operating site, structure, and other facilities in a safe and environmentally acceptable condition during nonoperating periods.

(c) The name and address of the operator shall be clearly posted and maintained in a prominent place at the entrance to the area of mining operations during periods of nonoperation.

§ 3802.4-8 Cessation of operations.

The operator shall, within 1 year following cessation of operations, remove all structures, equipment, and other facilities and reclaim the site of operations, unless variances are agreed to in writing by the authorized officer. Additional time may be granted by the authorized officer upon a show of good cause by the operator.

§ 3802.5 Appeals.

(a) Any party adversely affected by a decision of the authorized officer or the State Director made pursuant to the provisions of this subpart shall have a right of appeal to the Board of Land Appeals, Office of Hearings and Appeals, pursuant to part 4 of this title.

(b) In any case involving lands under the jurisdiction of any agency other than the Department of the Interior, or an office of the Department of the Interior other than the Bureau of Land Management, the office rendering a decision shall designate the authorized officer of such agency as an adverse party on whom a copy of any notice of appeal and any statement of reasons, written arguments, or brief must be served.

§ 3802.6 Public availability of information.

(a) Except as provided herein, all information and data, including plans of operation, submitted by the operator shall be available for examination by the public at the office of the authorized officer in accordance with the provisions of the Freedom of Information Act (F.O.I.A.).

(b) Information and data submitted and specifically identified by the operator as containing trade secrets or confidential or privileged commercial or financial information and so determined by the authorized officer will not be available for public examination.

(c) The determination concerning specific information which may be withheld from public examination will be made in accordance with the rules in 43 CFR Part 2.

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Public Law 91-631
91st Congress, S. 719
December 31, 1970

An Act

84 STAT. 1876

To establish a national mining and minerals policy.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Mining and Minerals Policy Act of 1970". Mining and Minerals Policy Act of 1970.

SEC. 2. The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries, (2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security and environmental needs, (3) mining, mineral, and metallurgical research, including the use and recycling of scrap to promote the wise and efficient use of our natural and reclaimable mineral resources, and (4) the study and development of methods for the disposal, control, and reclamation of mineral waste products, and the reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities.

For the purpose of this Act "minerals" shall include all minerals and mineral fuels including oil, gas, coal, oil shale and uranium. "Minerals."

It shall be the responsibility of the Secretary of the Interior to carry out this policy when exercising his authority under such programs as may be authorized by law other than this Act. For this purpose the Secretary of the Interior shall include in his annual report to the Congress a report on the state of the domestic mining, minerals, and mineral reclamation industries, including a statement of the trend in utilization and depletion of these resources, together with such recommendations for legislative programs as may be necessary to implement the policy of this Act. Report to Congress.

Approved December 31, 1970.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 91-1442 (Comm. on Interior and Insular Affairs).
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CONGRESSIONAL RECORD:
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